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President's Report

FOR THE YEAR ENDING
30TH JUNE, 1925
1924/25

PRESIDENT'S REPORT

1924-1925

To the Governors of the University of Toronto:

GENTLEMEN:—

I beg to submit the following report on the academic work of the University and University College during the twelve months ended June 30th, 1925.

The total staff of the University and University College numbered 595, of whom 72 were professors, 61 associate professors, 58 assistant professors, 92 lecturers, associates (in medicine) and instructors in the College of Education, 1 director, 2 directors of field work, 309 demonstrators, fellows and instructors with sessional appointments. They were distributed as follows:

	Professors	Associate Professors	Assistant Professors	Associates	Lecturers	Director	Director of Field Work	Other Sessional Appointments
University (Faculty of Arts)	26	19	21	..	22	..	..	63
University College	11	12	6	..	7	..	..	9
Faculty of Medicine	21*	13	15	22	7†	..	..	169
Faculty of Applied Science	11	7	12	..	13‡	..	..	39
Faculty of Household Science	..	2	1	..	2	..	..	5
Faculty of Forestry	1	3	..	..	..	..	..	1
Faculty of Music	..	.	..	..	4	..	..	..
Public Health Nursing	..	..	..	..	..	1	1	13
Social Service	1	..	..	..	..	..	1	10
Ontario College of Education	2	5	3	..	19	..	..	..

*1 also in University
†2 also in Ontario College of Education
‡2 also in University

In Victoria College there were:

Professors	14
Associate Professors	2
Lecturers	6
Special Instructors	3

In Trinity College there were:

Professors	12
Lecturers	7

In St. Michael's College there were:

Professors	11
Lecturers	8

The following members of the staff retired:

John Macnaughton, M.A., LL.D. (Queen's), Professor of Latin; Albert Ham. Mus. Doc., Lecturer on Church Music.

Professor Macnaughton occupied the chair of Latin in University College for six years after long and varied service in Queen's and McGill Universities. His former students will always carry with them the memory of a brilliant and inspiring teacher who pointed out to them as few could the meaning of classical literature. His colleagues will always think of him as a warm-hearted friend and most stimulating companion.

The retirement of Dr. Albert Ham is the conclusion of his close association for a quarter of a century with the musical affairs of the University, which is deeply grateful for his long and sustained interest.

It is with deep regret that I record the deaths of Dr. W. Ray Hodge and Dr. G. S. Strathy, two of the most promising of the younger members of the staff of the Faculty of Medicine. At the time of his death Dr. Hodge was carrying on research in the Connaught Laboratories and seemed to be on the threshold of a brilliant career. Dr. Strathy also, who died after a longer illness, had already marked out for himself a future to which we were looking forward in this University with much satisfaction.

The following resigned:

James Winfred Bridges, B.A. (McGill), A. M., Ph.D. (Harvard), Associate Professor of Psychology; Ubert Cecil Holland, B.A.Sc., Lecturer in Mechanical Engineering.

Leave of absence was granted to the following:

For the Michaelmas Term:—Joseph Horace Faull, B.A., Ph.D. (Harvard), Professor of Botany.

For the year:—Herbert John Davis, M.A. (Oxon.), Associate Professor of English; François Charles Archille Jeanneret, B.A., Associate Professor of French; Marcel Moraud, B. ès L., Associate Professor of French, owing to ill-health; Miss Jessie Gertrude Wright, Ph.D., Lecturer in Botany, to exchange with Miss E. R. L. Reed of the University of Western Australia.

The following new appointments and promotions were made during the year:

In the Faculty of Arts—Appointments:—Jacques Chapelon, D.Sc. (Paris), Professor Agréé in Mathematics for the year; Reynold Kenneth Young, B.A. (Tor.), Ph.D. (Cal.), Associate Professor of Astronomy; Wilhelm Ernst Blatz, M.A., M.B. (Tor.), Ph.D. (Chicago), Assistant Professor of Psychology; Earle Douglas MacPhee, M.A., B.Educ. (Edinburgh), Assistant Professor of Psychology; Fulton H. Anderson, Ph.D., Lecturer in Philosophy; Alexander Brady, B.A. (Tor. and Oxon.), Lecturer in Political Economy; Sperrin Noah Fulton Chant, M.A., Lecturer in Psychology; James Forrester Davison, B.A., LL.B. (Dalhousie), LL.M. (Harvard), Lecturer in Roman Law and Jurisprudence; George Glazebrook, B.A. (Tor. and Oxon.), Lecturer in History; William John Knox Harkness, M.A., Lecturer in Limnobiology; Miss Evangeline Harris, B.A. (Oxon.), M.A. (Tor.), Lecturer in Latin; Miss Adeline M. Lobb, B.A. (Oxon.), M.A. (Tor.), Lecturer in English.

Promotions:—Eli Frank Burton, B.A. (Cantab), Ph.D. (Tor.), from an associate-professorship to a professorship in Physics; Robert Boyd Thomson, B.A., from an associate-professorship to a professorship in Phanerogamic Botany; William Hall Clawson, B.A. (N.B.), M.A., Ph.D. (Harvard), from an assistant-professorship to an associate-professorship in English; Lachlan Gilchrist, M.A., Ph.D. (Chicago), from an assistant-professorship to an associate-professorship in Physics; Henry Allan McTaggart, B.A. (Cantab), Ph.D. (Tor.), from an assistant-professorship to an associate-professorship in Physics; Irvine Rudsdale Pounder, M.A., from an assistant-professorship to an associate-professorship in Mathematics; William Harold Trevorrow Baillie, M.A., M.B., from a lectureship to an assistant-professorship in Mammalian Anatomy; George Henry Duff, Ph.D., from a lectureship to an assistant-professorship in Botany; Harold Adams Innis, M.A. (McMaster), Ph.D. (Chicago), from a lectureship to an assistant-professorship in Political Economy.

In the Faculty of Medicine—Appointments:—Clarence B. Farrar, A.B. (Harvard), M.D. (Johns Hopkins), Professor of Psychiatry; John Taylor

Fotheringham, B.A., M.B., M.D., C.M., LL.D., Professor of History of Medicine; William Ludlow Holman, B.A., M.D., C.M. (McGill), Associate Professor of Bacteriology; Henry Albert Beatty, M.B., Assistant Professor of Clinical Surgery; Herbert Ernest Clutterbuck, M.D., C.M., Associate in Clinical Surgery; David Edwin Robertson, M.B., Associate in Clinical Surgery; Gordon Campbell Cameron, M.D., Lecturer in Bacteriology.

Promotions:—William Lipsett Robinson, B.A. (McMaster), M.B. (Tor.), from a lectureship to an assistant-professorship of Pathology.

In the Faculty of Applied Science—Appointments:—William Gourlay McIntosh, B.A.Sc., Lecturer in Machine Design; E. A. Smith, M.A. (McMaster), Lecturer in Chemical Engineering.

Promotions:—Clarence Richard Young, B.A.Sc., C.E., from an associate-professorship to a professorship of Structural Engineering; Eric Ross Arthur, M.A., B.Arch. (Liverpool), from a lectureship to an assistant-professorship of Architecture; William James Turnbull Wright, B.A.Sc., from a lectureship to an assistant-professorship of Engineering Drawing.

In the Ontario College of Education—Promotions:—Frederick Ethbert Coombs, M.A., from an assistant-professorship to an associate-professorship of Elementary Subjects; John Oliver Carlisle, M.A., from an instructorship to an assistant-professorship of Classics.

Public Health Nursing Department—Appointment:—Miss Florence Emory, Assistant Director.

The total number of students registered in the University in 1924-1925 was 4,802, distributed as follows:

				Men	Women	Total
Faculty of Arts				1,311	1,189	2,500
University of Toronto	145	163	308			
University College	716	570	1,286			
Victoria College	272	285	557			
Trinity College	80	71	151			
St. Michael's College	112	114	226			
Registered twice	14	14	28			
Faculty of Medicine				730	68	798
Faculty of Applied Science and Engineering				485	3	488
Faculty of Household Science				..	23	23
Ontario College of Education				252	219	471
Faculty of Forestry				43	..	43
Faculty of Music				19	44	63
School of Graduate Studies				240	96	336
Department of Social Service				12	83	95
Department of Public Health Nursing				..	50	50
Registered twice				41	24	65
				3,051	1,751	4,802

The figures may be further analyzed as follows:—

FACULTY OF ARTS

University of Toronto

	Men	Women	Total
Teachers' Courses and Summer Session	128	153	281
Occasional Arts students	17	10	27
	145	163	308

University College

	Men	Women	Total
First year undergraduates	250	170	420
Second year undergraduates	163	122	285
Third year undergraduates	163	120	283
Fourth year undergraduates	108	127	235
Occasional students	33	32	65
Registered twice	1	1	2
	716	570	1286

Victoria College

	Men	Women	Total
First year undergraduates	78	76	154
Second year undergraduates	83	62	145
Third year undergraduates	52	79	131
Fourth year undergraduates	45	61	106
Occasional students	14	7	21
	272	285	557

Trinity College

	Men	Women	Total
First year undergraduates	29	26	55
Second year undergraduates	14	15	29
Third year undergraduates	19	14	33
Fourth year undergraduates	14	14	28
Occasional students	4	2	6
	80	71	151

St. Michael's College

	Men	Women	Total
First year undergraduates	49	36	85
Second year undergraduates	17	19	36
Third year undergraduates	26	31	57
Fourth year undergraduates	19	28	47
Occasional students	1	..	1
	112	114	226

FACULTY OF MEDICINE

	Men	Women	Total
First year undergraduates	91	14	105
Second year undergraduates	103	13	116
Third year undergraduates	105	12	117
Fourth year undergraduates	115	9	124
Fifth year undergraduates	176	9	185
Sixth year undergraduates	117	10	127
B.Sc (Med.) undergraduates	4	1	5
Candidates for D.P.H	7	..	7
Candidates for Diploma of Radiology	2	..	2
Short Courses in Radiology	1	..	1
Post Graduate students	6	..	6
Occasional students	3	..	3
	730	68	798

FACULTY OF APPLIED SCIENCE AND ENGINEERING

	Men	Women	Total
First year undergraduates	115	1	116
Second year undergraduates	119	2	121
Third year undergraduates	113	..	113
Fourth year undergraduates	138	..	138
	485	3	488

FACULTY OF HOUSEHOLD SCIENCE

	Men	Women	Total
First year undergraduates	..	19	19
Second year undergraduates	..	4	4
	..	23	23

ONTARIO COLLEGE OF EDUCATION

	Men	Women	Total
Students in attendance	114	190	304
Extra-Mural students	29	20	49
Students in B.Paed. course	109	9	118
	252	219	471

FACULTY OF FORESTRY

	Men	Women	Total
First year undergraduates	13	..	13
Second year undergraduates	6	..	6
Third year undergraduates	12	..	12
Fourth year undergraduates	12	..	12
	43	..	43

FACULTY OF MUSIC

	Men	Women	Total
First year undergraduates	10	23	33
Second year undergraduates	4	14	18
Third year undergraduates	4	7	11
Candidate for Mus. Doc. degree	1	..	1
	19	44	63

SCHOOL OF GRADUATE STUDIES

	Men	Women	Total
Candidates for Ph.D	53	16	69
Candidates for M.A	91	48	139
Candidates for M.D	2	..	2
Candidates for Ch.M	1	..	1
Candidates for M.A.Sc	10	..	10
Candidates for M.Arch	2	..	2
Candidates for C.E	3	..	3
Candidates for E.E	1	..	1
Candidates for Chem.E	2	..	2
Candidates for D.Paed	53	4	57
Candidates for F.E	1	..	1
Graduate students	26	28	54
Duplicates	5	..	5
	240	96	336

DEPARTMENT OF SOCIAL SERVICE

	Men	Women	Total
First year full-time students	1	24	25
Second year full-time students	3	13	16
Part-time students	8	46	54
	12	83	95

DEPARTMENT OF PUBLIC HEALTH NURSING

	Men	Women	Total
Full-time students	..	33	33
Part-time students	..	17	17
	..	50	50

In addition to the students in regular courses at least 2,545 persons have been receiving instruction provided by the University through its evening classes held in Toronto, Hamilton, and other cities and towns of the Province.

The numbers examined in the different departments of the University, including those persons granted standing for Military Studies, were as follows:

Arts:		
Fourth year	432	
Third year	550	
Second year	577	
First year	743	
Teachers' Course	238	
		2,540

Medicine:		
Sixth year	130	
Fifth year	186	
Fourth year	124	
Third year	114	
Second year	99	
First year	101	
D.P.H.	3	
D.R.	2	
B.Sc. (Med.)	5	
		764
Applied Science and Engineering:		
Fourth year	137	
Third year	110	
Second year	121	
First year	114	
		482
Household Science		22
Education		425
Forestry		42
Music		54
Graduate Studies		148
Social Service		64
Public Health Nursing		29
Law		29
Dentistry		364
Pharmacy		89
Agriculture		39
Veterinary Science		15
Local Examinations in Music		12,415

The degrees conferred were:	Men	Women	Total
LL. D. (Honorary)	4	1	5
D.Litt. (Honorary)	1	..	1
M.D. (Honorary)	1	..	1
D.Sc. (Honorary)	9	..	9
Ph.D.	11	2	13
M.A.	44	27	71
M.A.Sc.	9	..	9
M.Arch.	2	..	2
C.E.	2	..	2
E.E.	1	..	1
Chem.E.	1	..	1
F.E.	1	..	1
B.A.	185	218	403
B.Comm.	12	..	12
M.B.	129	13	142
B.Sc. (Med.)	4	1	5
B.A.Sc.	123	..	123
B.Arch.	8	..	8
B.Paed.	25	3	28
B.Sc.F.	10	..	10
Mus.Bac.	1	1	2
LL.B.	4	..	4
D.D.S.	102	..	102
B.S.A.	44	..	44
B.V.Sc.	15	..	15
Phm.B.	72	7	79
D.P.H.	6	..	6
	826	273	1,099

The number of students in the Faculty of Arts exceeded that of the previous year by nearly 170, there being a gain in all the Colleges, especially University College. The ratio of men to women was approximately 50%, though in University College it was somewhat higher. In Medicine and in Applied Science there was a slight reduction, but it may be expected that in all the Faculties

we have reached a stable condition, so that in the next few years much change need not be anticipated. In recent years growth in the Graduate School has been noticeable, but here also quiet increase is to be expected.

In view of the raising of standards at matriculation that has recently taken place it is of interest to observe the average age of students who are now entering the University of Toronto. In the last four years the average of those entering Arts has been 19 years, Medicine 19.87, Applied Science 19.5, Forestry 20.15. In the last two years the age of entrance both into Arts and into Medicine has been slightly lower than in previous years, whereas in Applied Science it has remained stable. These figures support what I have so often said, that when the University raises its standards of entrance gradually the Schools of the Province are able to respond without in the long run increasing materially the time for preparation required in school. In the future it is to the Schools rather than to the University that we must look for raising the standards, and I am confident that, as in European countries, a higher grade of work is attainable if we set out to return to the schools some of the work that is now done in Universities. Increased intensiveness in the training of such pupils as are looking forward to professional and academic courses, together with the opportunity of the earlier and more thorough study of languages, would in some measure prevent the waste and the disabilities that attend so much of the secondary education of this continent as compared with that of Britain and Western Europe.

The work of the University is very fully outlined in the reports herewith appended, and I draw the attention of those interested in the University to what is there contained, which sets forth the variety of studies and researches that have been conducted during the past year. I have no doubt that the work has been conducted with much efficiency, and that the standards have been well maintained during the past year.

The health of the undergraduate body is being cared for with increasing efficiency. Nearly 94% of the men and 88.6% of the women are qualified to take physical training. Corrective and supervised classes have done much to improve those who had deficiencies in former years, and among the women 62% of such persons show improvement over the former year. Dr. Edith Gordon, however, again calls attention to the lack of infirmary facilities, which are specially felt in the case of the students of the College of Education. Here I must once more emphasize strongly the need of a new building for women in which adequate accommodation will be provided for their physical training. The large number of women who are entering the University is increasing the urgency of this need every year.

101 men learned to swim and 217 received the Royal Life Saving award. Throughout the year there was healthy sport, which is not to be judged by failure to win spectacular games which draw the attention of the public. The Rowing Club had an unusually successful year. The Senior Eight "won the Olympic trials, and at Paris were defeated only by Yale, and that by a very small margin". The University is fortunate in those who have the oversight of its physical departments and in the healthy tone that prevails.

I am glad also to report again that there has been a great increase in the use of the Library, especially by undergraduates, and also by graduates. In the last three years it has amounted to fully one hundred per cent. This means further demands upon the funds, which are still insufficient to meet the rapidly growing needs of a university in which intellectual activity is so much awake.

It will be observed also from the reports submitted that there is continued activity in research in a great variety of departments. Space forbids even enumerating the chief contributions that have been made through these investigations. They cover all the sciences, and many of them have most im-

portant bearing on practical results, and several have received recognition among the learned societies of both Great Britain and the United States.

In this report I wish to draw attention to the work that has been done in the course in Commerce and Finance leading to the degree of Bachelor of Commerce. It was inaugurated in the year 1920, and from small beginnings has come to enrol a body of students which has steadily increased year by year. The first year registration is now between seventy and eighty, and from present indications seems likely to maintain itself at not less than that level. The total enrolment in the course for the six years since its inauguration is as follows:

1920-21	1921-22	1922-23	1923-24	1924-25	1925-26
25	33	70	125	156	185

We can therefore with probability contemplate in the next two or three years a total enrolment of at least 230 students.

It was considered, by the members of the staff chiefly concerned with the work of the course, to be especially important that high standards should be maintained. The character of the work was established on the same basis as an honour course in Arts, and those who failed to reach that standard were eliminated. As a result the quality of the students compares now favourably with those in "honour" courses.

While the larger part of the work of the course fell within the subjects of economics, special training was provided in actuarial science and accounting, and other classes, including economic geology and business administration, were added. Special classes in modern languages were also provided by the language departments to meet the needs of the commerce students. It was felt that the object of the course was not to train students in the technical aspects of business—a training which can be acquired in any case only in the practical experience of the business world—but to give that insight into the principles of economics, of statistics, of accounting, and other subjects which constitute the best academic preparation for the world of affairs. During their training all the students of the course are required to spend at least one summer in some field of business, but it was not thought desirable to establish courses in subjects like salesmanship, advertising, and so forth.

The work of the course has been greatly aided by the generous co-operation of leading business men in the city of Toronto and elsewhere. Thus in the year 1924-25 the students of the course were addressed by Mr. Ireland and Mr. Mills of the T. Eaton Company, Mr. C. L. Burton of the Robert Simpson Company, Mr. Fox of the Wm. Davies Company, Mr. Kent of W. J. Gage and Company, Mr. Atkinson of the *Toronto Daily Star*, Mr. Hunter of the MacLean Publishing Company, Mr. Glazebrook of Glazebrook and Cronyn, Mr. Douglas Kerr of the Canada Life Company, Mr. Locke of the Confederation Life Company, all of the City of Toronto. In addition lectures were given by Mr. Dennis of the Canadian Pacific Railway, Montreal, Mr. Coats of the Dominion Bureau of Statistics, Ottawa, Mr. Nicholson of Austin and Nicholson, Chapleau, Mr. Sloan of the Standard Statistics Company, New York, Mr. Baldwin of the Babson Statistical Organization, Wellesley Hills, Mass., and Professor Bullock of the Harvard Economic Service. I wish to express our appreciation of the ready and valuable assistance rendered by these gentlemen and the organizations which they represent. In this way the students are given a wide acquaintance with the conditions and problems of commerce and finance which they could not otherwise obtain.

Special lectures are also arranged where possible to acquaint the students with economic conditions outside of Canada. During the session 1924-25 addresses were generously given by Sir George Paish on The Financial Prospect in France, and by Mr. S. K. Ratcliffe on the Situation in Britain.

Under the direction of the Department of Political Economy special in-

vestigations of Canadian industries have been planned, in the conduct of which the senior students of the course in Commerce and Finance are enlisted. The first investigation, conducted by Professor Innis, was one into the Fur Trade, and the results, published in a number of bulletins, have received very favourable comment from those engaged in the trade. The second investigation is now being arranged, a report on the mining industry of Northern Ontario, which is to be conducted by Professor Jackson. It is planned to have a similar investigation every two years, and it is hoped that the publication of the resulting reports will be of real value not only to the students but to the business world.

The students of the course have already developed a solidarity and *esprit de corps* of their own. A Commerce Club has been instituted by them, which arranges debates, addresses and social functions, forming a meeting ground for all the years.

As soon as the finances of the University permit a chair of Geography should be established. This subject is now receiving great attention in England, but except in so far as it is dealt with on the physical side it has not yet been given adequate recognition in Canadian Universities, though it is essential for historical, economic and commercial studies.

During the past session two important subjects have been added to the courses of instruction. That of Ceramics has been made possible by the generous gift of the National Clay Products Association, the fulfilment of long deferred hope. Also, a lectureship in Ethnology was established, thus resuming a line of investigation and instruction which many years ago was carried on in this University. There are almost unlimited opportunities for the development of this subject in Canada, and for this work no place is better situated than Toronto with its great archaeological museum. Though for several years Sir Bertram Windle has been delivering courses of public lectures on archaeological subjects, which have been greatly appreciated, it was felt by the Governors that the time had come to make a permanent appointment in Ethnology whereby the subject could be treated more fully in undergraduate and graduate work.

After much careful deliberation the long-hoped for creation of a Faculty of Dentistry has been consummated, and on July 1st, 1925, the Royal College of Dental Surgeons handed over the School of Dentistry with its building and equipment to the University, so that hereafter the work in dental education and research will be controlled by the University through the Faculty of Dentistry. We congratulate the Royal College of Dental Surgeons on the long and successful career of the School and on the reputation it has made for itself on this continent. We welcome the new Faculty into the University and hope that this change will mean still further progress in dental education.

As in former years, there has been great activity in the Extension Department, especially in the courses for teachers from Toronto and neighbouring districts. The effort of the University is also to provide instruction in as many subjects as possible for any body of earnest students who desire advanced work.

Of 248 postgraduate students 73 came from other Canadian Universities, 12 from Imperial Universities and 8 from foreign Universities. The incoming of so many students from such widely scattered areas adds greatly to the interest of the University and stimulates this School, the great range of which is evident in the variety of subjects chosen for study.

Another educational element in the University which has been developing in recent years is found in the distinguished lecturers who visit the University during the year, and in the great variety of their themes. These lecturers have come to us from other Universities and from various walks in life and bring new points of view to groups of students and of the staff with whom they are associated.

During the session the following special lectures were delivered: A series of lectures, particularly for the students in the Department of Political Economy,

on "Australian Labour Problems" and "Geography and Resources of Australia" by Professor H. Heaton of the University of Adelaide; a course of twelve lectures on "Some Religions of the World" by Sir Bertram Windle, F.R.S., Special Lecturer on Ethnology in the University of Toronto; two lectures on "Cosmological Consequences of the Finite Extent of the Universe" by Dr. L. Silberstein of the Eastman Research Laboratory, Rochester, N.Y.; two lectures on "The Geology of North Greenland" and "Explorations in North Greenland" by Dr. Lauge Koch of the Geological Survey of Denmark; two lectures by Rt. Hon. H. A. L. Fisher on "Our Heritage" and "Methods in Historical Research"; two lectures by Dr. Lauro De Bosis of the Royal University of Rome on "Benedetto Groce and the Sense of Beauty" and "The New Literary Movements"; a lecture on "The Recovery Process in Muscular Activity" by Professor A. V. Hill, F.R.S., Jodrell Professor of Physiology, University College, London, England; a lecture on "Some Episodes in the Early History of Oxford" by Rt. Rev. A. C. Headlam, Lord Bishop of Gloucester; a lecture on "Aesthetic Problems of the Twentieth Century" by E. F. Carritt, Esq., University College, Oxford, Exchange Professor at the University of Michigan; a lecture on "Ore Magmas" by Josiah E. Spurr, Esq., Editor-in-Chief of the Engineering and Mining Journal-Press, New York; a lecture on "English Experiments in Wage Regulation" by Miss M. Cecile Matheson; a lecture on "Nationality" by Sir Richard Lodge, formerly Professor of History of the University of Edinburgh.

A Classical Conference was held in February, the aim of which was to call attention to the widely extended revival of interest in the teaching of languages, and in particular to awaken a new confidence in the value of the Latin and Greek Classics as instruments of education. At this conference addresses were delivered by Professor Robert J. Bonner of the University of Chicago on "Oratory and Litigation in Ancient Athens"; by Professor George Lincoln Hendrickson, Yale University, on "Archilochus and the Victims of his Iambics"; by Professor F. W. Shipley, Washington University, St. Louis, on "Virgil in the Nineteenth and Twentieth Centuries"; and, by Professor Berthold L. Ullman, State University of Iowa, on "Recent Tendencies in the Teaching of Latin".

Dr. F. A. Mouré, the University Organist, again gave during the year a successful series of Organ Recitals, beginning in October and ending in March. The majority of these recitals were broadcast by arrangement with the *Toronto Daily Star*.

The activities of Hart House have been greater than ever. The indefatigable labour and interest of the Warden have during the past year been successfully supported by the new Comptroller, Mr. Gilley, who has devoted himself with unremitting ability to his work. Mr. Campbell, the new steward, has also made a great success of the Dining Hall.

During the past year the University has received the following benefactions:

From the Rockefeller Foundation, payment on account of grant for construction of New Hygiene Building, $100,000; first payment on Account of School of Hygiene, $12,503.91; Eaton Endowment (annual payment), $25,000; Carnegie Corporation for Research in Diabetes, $8,175; His Honour Sir J. A. M. Aikins, LL.D., for a scholarship in English, $5,000; Dr. A. H. F. Barbour of Edinburgh for further endowment of the George Brown Memorial Scholarship in Medical Science, $4,847.50; Graduate Fellowships: Colonel R. W. Leonard, $500; Imperial Oil Company, $500; Sir Edward Kemp, $500; Robert Simpson Company (for 1925-26), $500; Canadian Pacific Railway (for 1925-26), $1,500; the late D. A. Dunlap, Esq., Donation for Psychology, $2,400; Canadian Oral Prophylactic Association for Research in Dentistry, $1,632.38; A. R. Kaufman, Esq., for Fellowship in Town Planning, $600; Dr. R. A. Reeve Bequest and Prize, $650; Jenkins Brothers Limited, for Scholarship in Engineering, $500; Robert Bruce Bursary, $458.93; Hon. N. W. Rowell, LL.D., K.C., for Langford Rowell Scholarship, University Schools, $200; McCaul Scholarship in Classics:

G. A. H. Fraser, Esq., $25; Principal M. Hutton, $25; A. M. Stewart, Esq., K.C., $25; Professor F. Tracy, for prize in Ethics, $20; University College Alumnae, for prize in English, $10; an Echelon Spectrograph for the Physical Laboratory from Sigmund Samuel, Esq., and F. D. Benjamin, Esq., valued at $2,500.

I cannot refrain from mentioning the death a few months ago of one of the greatest benefactors of the Royal Ontario Museum of Archaeology, George Crofts, Esq., LL.D. Through his wide knowledge of Chinese Art, his long experience in China and in the Orient and his generosity he made it possible for the Trustees of the Museum to possess, as they do to-day, one of the finest collections of Chinese Art in the world.

Also the University and the Province have lost through the death of D. A. Dunlap, Esq., a most liberal benefactor, who, in his lifetime, contributed generously to the support of objects for which his help was asked, and who bequeathed to the University one hundred thousand dollars for medical research.

The erection of the new Forestry Building has opened a new chapter for that Faculty, and it is hoped that the Botanical Laboratory, with which it so long shared the old building, will soon have adequate quarters.

Among other urgent building needs of the University at present are residences for the men and women of University College. The College cannot fulfil its purpose for the people of this Province until this long delayed accommodation is provided. I hope that it will be possible in the near future to make a beginning in its provision.

The acquisition of the grounds formerly owned by the Aura Lee Company has been a very great boon for the University of Toronto Schools. It has been a solution of one of their long standing problems.

In the month of March Dean Pakenham left on a long earned holiday, the first that he has had since he undertook his duties in the University, and during his absence his place was worthily filled by Professor Sandiford.

I have to thank the Board of Governors for their kindness in granting me leave of absence from the end of March until the opening of the current academic year. During these months I had the opportunity of visiting most of the leading Universities of Great Britain and of comparing their methods with our own. I wish to take this opportunity also to express to Principal Hutton my appreciation of his kindness in undertaking the duties of President during my absence.

All of which is respectfully submitted.

ROBT. A. FALCONER.
President.

November 26th, 1925.

APPENDIX A

(1) Report of the Principal of University College.
(2) Report of the Dean of the Faculty of Medicine.
(3) Report of the Dean of the Faculty of Applied Science.
(4) Report of the Dean of the Ontario College of Education.
(5) Report of the Dean of the Faculty of Forestry.
(6) Report of the Dean of the Faculty of Music.
(7) Report of the Dean of the School of Graduate Studies.
(8) Report on Research.
(9) Publications.
(10) Report of the Librarian.
(11) Report of the Director of the Department of Social Service.
(12) Report of the Director of the Department of Public Health Nursing.
(13) Report of the Director of University Extension and Publicity.
(14) Report of the Director of the Department of Military Studies.
(15) Report of Health Services.
(16) Report of the Warden of Hart House.
(17) Report of the Director of the Connaught Laboratories.

(18) Statement regarding the Biological Museum.
(19) Statement regarding the Museum of Geology.
(20) Statement regarding the Museum of Palaeontology.
(21) Statement regarding the Museum of Mineralogy.
(22) Statement regarding the Museum of Archaeology.

(1) REPORT OF THE PRINCIPAL OF UNIVERSITY COLLEGE

(Professor Maurice Hutton)

The session 1924-25 has been of advantage to students and to staff. The old Residence Dining Hall was at an early date converted into a students' common-room, and redecorated; it served as a dining-hall for the Alumni of the College in October last, on which occasion the Chancellor, Sir William Mulock, presided; it has been very welcome both before and since to the undergraduates of the college; the executive of the Literary and Athletic Society gave a Sunday evening concert therein recently; at Convocation in June it will be the scene of a reception to returning Alumni.

More slowly the Croft Chapter house has been refitted as a senior common-room; the artificial roof has been removed and the room restored to its former beauty; portraits of Professors Squair and Alexander have been, or are being, added to its walls; it is only a question of time before it takes its place as one of the pleastantest rendezvous for members of the College staff and for those of the University staff, who are still housed in the College.

Less fortunately and happily the session sees the close of Professor Macnaughton's tenure of the chair of Latin; he has not been long enough in the University of Toronto for the students, as a whole, to appreciate to the full the services he has latterly rendered to us as before to the Universities of Queen's and McGill; no one but Professor Macnaughton could have made his presence felt in the College in the degree in which staff and students have felt his inspiration, in the space of the few years which were all that he could give this University and College. "To love him is a liberal education."

No other changes of note have marked the year, so far as appointments are concerned; but the return of Professor Meek to his old College from the United States deserves a word which should have been included in last year's report; he continues to do good work in the department of Oriental Literature, where the "Religious Knowledge" option, as offered by University College, draws large classes.

The absence of the President and Lady Falconer in Great Britain since the end of March is regretted by the University public, now a very large body; but the reason for it, his selection as Lecturer on the Sir George Watson foundation, has evoked universal recognition of the fitness of the choice made, and a general tribute to the success of his administration in the past; as well as warm wishes for their enjoyment of a brief holiday well-earned. No one is better qualified than Sir Robert to instruct the Universities of England and of Scotland about the highly important and ever-changing relations between Canada and her southern neighbour. No woman has deserved better than Lady Falconer the affection and regard of all the women connected with our large staff.

The Premier, who is also Minister of Education, has recognized the difficulties and dangers on which Goldwin Smith always laid stress, that our position as the University and College of the Province is apt to attract within our walls a large number of students, whose talents or whose equipment fall short of University standards, and who fail to survive the examinations of the first year. The Minister hopes that the schools of the Province can take the place of the University for some of these immature minds, so far as the courses of the first

and second years are concerned; and that time and money can be saved where they are now wasted and disappointments averted, which are now suffered.

The University, on its side, has long desired better standards at Matriculation and will welcome appropriate action of the Minister.

(2) REPORT OF THE DEAN OF THE FACULTY OF MEDICINE

(Professor A. Primrose)

The last group of students who began their studies under the terms of the curriculum of study extending over five years graduated a year ago. The year which has just terminated (1924-1925) found the entire body of students working under the requirements of the course demanding six years of undergraduate work. The classes in the final years are still unduly large owing to post-war conditions, which a few years ago brought an exceptionally large number of students into the medical course. Another year must yet elapse before we are relieved from this abnormal condition; next session, in the final year, there will register 185 students, in future years not more than 125 students will be found in any year; this will prove of very great advantage particularly with regard to the clinical facilities provided in our hospitals for the classes of the final years.

In January, 1925, the Board of Governors appointed Dr. Clarence B. Farrar to the Chair of Psychiatry in succession to the late Dr. C. K. Clarke. Dr. Farrar is a graduate of Harvard University and of Johns Hopkins University. He also took post-graduate work in Heidelburg and in Paris. He comes to us well recognized as one of the foremost authorities on Psychiatry not only on this continent but abroad. For the past few years he was in charge of the Homewood Sanitarium at Guelph, which Institution underwent complete reorganization under his direction, and has been brought to a high state of efficiency. During the war he served with the Canadian Army Medical Corps, and was Chief Psychiatrist to the Military Hospital's Commission and to the Soldiers' Civil Re-establishment. Professor Farrar has been appointed, by the Ontario Government, Director of the Psychiatric Clinic in the new Reception Hospital about to be opened in Surrey Place. In this dual capacity he will be able to render splendid service in the University. Facilities unsurpassed will be afforded for instruction and research, under his direction, in the Department of Psychiatry.

We note the establishment of a Chair in the History of Medicine and the appointment of Dr. J. T. Fotheringham thereto. The Board of Governors have made a new and important departure in establishing this Chair and have secured one eminently well fitted to occupy it, in the person of Dr. Fotheringham, whose high qualifications for the position are universally recognized.

An important addition to the staff was made in the appointment of Dr. W. L. Holman as Associate-Professor in Bacteriology. Dr. Holman is a graduate of McGill both in Arts and Medicine. He was formerly Professor of Bacteriology in the University of Pittsburg, Associate-Professor of Bacteriology in Leland Stanford University, California, and more recently Associate-Professor of Bacteriology in Johns Hopkins University, Baltimore.

In the death of Major-General George Sterling Ryerson, emeritus professor of Ophthalmology, is removed one who, for many years (1903-1918), was a faithful and effective member of the active teaching staff of the Faculty of Medicine.

We have to record also the death, in November last, of Dr. W. Ray Hodge, Junior Demonstrator in Medicine and Research Associate in the Connaught Laboratories. In his death the Faculty has lost a young man who possessed

exceptional qualifications for work of the highest order in scientific research and in teaching.

The active teaching staff in the Department of Medicine has suffered a severe loss in the death, after a short illness, of George Stewart Strathy. He graduated in Medicine from Trinity in 1905, and subsequently undertook post-graduate work in England, where, in 1908, he received the M.R.C.S. and L.R.C.P. On his return to Toronto he was appointed on the teaching staff of the University and the active staff of the Hospital for Sick Children. For some years he has been head of the Outdoor Department in Medicine of the Toronto General Hospital, a position which he continued to hold and in which he was doing splendid work at the time of his death. At the outbreak of the Great War he enlisted in the C.A.M.C., and eventually went to France in September, 1915, with No. 2, C.C.S. In September, 1917, he became Medical Officer to the 44th Battalion, serving at the front in the Somme, Messines-Wytschaete, Passchendale and Lens. Later still, he was on the staff of No. 14 and No. 16 Canadian General Hospitals. He was promoted to the rank of Lieut.-Colonel in 1918, and in the same year was mentioned in despatches. He thus had a splendid war record.

Dr. Strathy contracted a virulent infection from a patient whom he was attending and died after an illness of three weeks. He was much beloved by his colleagues in the Faculty, and his exceptional attainments as a physician and as a teacher were highly valued. His death, in the prime of life, is deeply deplored. He was an indefatigable worker, exhibiting keen insight and excellent judgment in the treatment of his patients, and inspiring the students with his own enthusiasm as a teacher of exceptional ability. The University can ill afford to lose such loyal and efficient members of its staff. The members of the Faculty and the students mourn the loss of one for whom they had the greatest affection and regard.

We record with deep regret the passing of Sir James MacKenzie, who died in January of this year. One year ago at Convocation of the University of Toronto there was conferred upon him the "Charles Mickle Fellowship"—a Fellowship which is awarded annually in the Faculty of Medicine to "that member of the medical profession who is considered by the Council of the Faculty of Medicine of the University of Toronto to have done most during the preceding ten years to advance sound knowledge of a practical kind in medical art or science." His contributions to medical science received world-wide recognition. In recent years he became famous as the founder of the "Institute for Clinical Research" at St. Andrews, Scotland.

We have much pleasure in recording the fact that Dr. A. W. M. Ellis, a graduate in Medicine of the University of Toronto, and a son of the late W. H. Ellis, former Dean of the Faculty of Applied Science in this University, was appointed to the Chair of Medicine of the Medical School of the London Hospital in England. This appointment is further interesting in that the recipient of this honour was a nephew of the donor of the "Charles Mickle" and the "Ellen Mickle" fellowships in the Faculty of Medicine.

Plans for the new building for the School of Hygiene and the Connaught Laboratories are being prepared and, it is anticipated, will soon be complete.

The site chosen for this new building is a location east of the Mining and Electrical buildings and south of the Biological building. The building will be 130 feet long by 50 feet wide with two lateral wings forty feet long by forty feet wide. There will be a sub-basement, basement and three additional floors. The capacity of the building will be about 700,000 cubic feet. The estimated cost of the building and equipment will be $350,000. This sum and $300,000 additional for endowment has been contributed to the University by the International Health Board of the Rockefeller Foundation.

It is hoped that the building will be completed and ready for occupancy in

September, 1926. The new School of Hygiene will provide accommodation for the Department of Hygiene and Preventive Medicine, the Connaught Laboratories and the Department of Public Health Nursing. All graduate and undergraduate instruction in Preventive Medicine, Hygiene and Public Health will be given in the new School. In addition, splendid facilities will be provided for research in Bacteriology, Immunology, Parasitology, Chemistry in relation to Public Health, Physiological Hygiene, Biometrics and Epidemiology.

This new School is one of three which have been established in North America as a result of contributions made by the International Health Board of the Rockefeller Foundation. A preliminary note of this splendid benefaction was made in the Dean's report a year ago. The other schools are in the Johns Hopkins University and in Harvard University.

The endowment for the new School of Hygiene will be augmented by the addition of the Connaught Laboratories Research Fund so that when the new School is opened it will have an initial endowment of $500,000. The Antitoxin and Insulin Divisions of the Connaught Laboratories will occupy the sub-basement and basement and a part of the south wing of the main floor of the new building. The Department of Public Health Nursing will have offices on the main floor, and a lecture theatre will also be on this floor. The second and third floors will contain a library, large and small teaching laboratories, and a number of special research laboratories. Accommodation will also be provided for the Insulin Committee of the University of Toronto. Dr. J. G. FitzGerald has been appointed Director of the School of Hygiene. He will continue to act as Director of the Connaught Laboratories and as Professor of Hygiene and Preventive Medicine.

The Eaton endowment and the grant made by the Rockefeller Foundation made it possible, a few years ago, to organize the clinical Departments on a basis securing a high standard of efficiency which is still maintained.

Department of Medicine:—A member of the staff of the Western Hospital, Dr. G. H. Agnew, has been appointed junior demonstrator in Medicine. Dr. R. S. Lang became Fellow in Medicine and Resident Physician on the medical service of the Toronto General Hospital to succeed Dr. W. P. Warner, who resigned through illness. We have already recorded the very serious loss sustained by the Department in the deaths of Dr. Strathy and Dr. Hodge.

In co-operation with Dr. Richards of the X-ray Department of the Toronto General Hospital a study was made of the effects of "diathermic" treatment in cases of pneumonia. The investigation showed that this form of treatment produces no very appreciable effect on the course of the disease.

Metabolic studies made on cases of high intestinal obstruction confirm the findings of Haden and Orr. These cases have been effectively treated by the administration of fluids and glucose with sodium and ammonium chloride given together or alone. Many other clinical problems dealing with diseases of the heart, lungs, spleen, kidneys, skin, blood-forming organs, nervous and gastro-intestinal systems, are under investigation.

In the sub-department of Paediatrics no changes have occurred in the personnel of the staff. In addition to teaching, research work has been carried on in connection with the elucidation of several problems, including chronic intestinal indigestion, which has been studied from the bacteriological and experimental standpoint. Clinical and experimental investigation have also been conducted in rickets, toxaemia-dehydration, nephritis, acute intestinal obstruction and diabetes. A report has recently been made on exsanguination-transfusion in acute intestinal intoxication, septicaemia, scarlet fever, erysipelas and burns.

Department of Surgery:—The surgical service in the Western Hospital was reorganized at the beginning of the session; Dr. H. A. Beatty became chief of the service and was granted University standing as Assistant Professor of Clinical

Surgery. Under this new arrangement much better facilities are afforded for instructional purposes.

The continued illness of Professor Walter McKeown is much regretted. We hope that he will be able to resume his duties as chief of the surgical service in St. Michael's Hospital at the beginning of next session. Dr. Gordon Foulds has been appointed junior demonstrator in Surgery and is on the staff of the genito-urinary service in St. Michael's Hospital.

Various problems in research have been studied during the year. Dr. Shouldice, working with Mr. Eagles of the Department of Pathological Chemistry, has been attempting to isolate the toxins in intestinal obstruction. Dr. Costain has continued his investigations in obstructive conditions in the lymphatic system. Dr. Kenneth McKenzie is engaged with Professor Linell of the Department of Anatomy in an effort to solve the problem of the production of choked disc.

The staff meetings continue at fortnightly intervals and are found extremely useful in unifying and comparing methods of teaching and technique. The teaching of surgical anatomy is carried on in demonstration clinics to the whole class and, in more detailed study, in classes of small groups of students instructed by junior clinicians.

Department of Obstetrics and Gynaecology:—No change has been made in the organization or personnel of the teaching staff. In the fifth year demonstrations were given to smaller groups than heretofore and term examinations conducted in each trimester proved of marked advantage. In the sixth year also smaller groups were formed and a post-natal clinic was established. The Metabolic unit has justified its existence by making important contributions to the study of the diet and treatment in the toxaemias of pregnancy. This work was carried out in collaboration with the staff of the Department of Pathological Chemistry.

The work in the out-patient department of Gynaecology has increased to such an extent that it becomes necessary to establish a daily clinic.

The special Departments of Ophthalmology and Oto-Laryngology:—The addition to the staff of Dr. A. E. MacDonald as full-time assistant in Ophthalmology has made it possible to establish an ophthalmic division in Pathology, which has the hearty co-operation and assistance of the Professor of Pathology. Specimens may now come from all parts of Ontario for diagnosis under existing conditions. In the Department of Oto-Laryngology research work is continued by Dr. Howard Burnham in connection with middle ear suppuration.

Department of Therapeutics:—The work of the fifth year consists of lectures on the principles of treatment, while the instruction in the final year is more of a practical nature, including the administration of anaesthetics. Dr. Easson Brown continued his investigations on Propylene gas, more particularly with reference to blood chemistry; he studied also Methane, Propane and Pentane. His results will contribute valuable data in connection with the therapeutic action of anaesthetics.

Department of Psychiatry:—Reference has been made elsewhere to the appointment of Dr. Clarence B. Farrar as Professor of Psychiatry in succession to the late Dr. C. K. Clarke. Professor Farrar's appointment was not made early enough to permit him to assume the organization of his department last session. The work for the academic year was carried on under the direction of Dr. Eric Clarke, whose zeal and devotion with regard thereto are worthy of record.

The Banting and Best Chair of Medical Research:—A year ago we recorded the facts regarding the establishment of this chair.

The laboratory space available has been totally inadequate for the work carried on in this department of medical research. It is hoped that satisfactory provision will be made in the near future to meet the requirements in this respect.

The head of the department has collaborated with Dr. G. H. W. Lucas and Miss Cairns in studying the function of the renal cortex. The results of this investigation will soon be published.

Further activities in the department may be indicated by the following list of papers which have been published in various journals:

F. G. Banting and Miss Cairns: Supra-renal insufficiency.

F. G. Banting: Insulin in diabetes; Insulin; Medical Research and discovery of Insulin; Medical Research.

B. S. Cornell: Pernicious anaemia. Chronic infection of bacillus Welchii.

C. H. Best and Miss K. Ridout: Observations of lactic acid of blood after insulin.

C. H. Best: Recent work on insulin.

C. H. Best and D. A. Scott: Preparation of insulin.

Department of Anatomy:—During the illness of the head of the Department, Dr. Watt acted as Director of the laboratory. Professor Brett, for similar reasons, took Professor McMurrich's place in the course of lectures on "Science and Civilization." Certain changes have been made in the course of study; gross anatomy will hereafter be taken partly in the second and partly in the third year instead of wholly in the second year as hitherto.

The optional courses conducted during the year were as follows:

B. & M. Science option—Dr. Watt	6 students
Review Course (IV Year)—Dr. Watt	24 students
Sectional Anatomy—Dr. Willson	19 students
Arthrology—Dr. Cates	39 students
Sense organs—Dr. Linell	12 students

A course in the anatomy of the nervous system was given by Dr. Linell to students of the third year in medicine and the fourth year of the Arts B. & M. course. A most satisfactory innovation was introduced in the demonstration of clinical cases illustrating the degeneration of certain nerve tracts. The course in Histology and Embryology was conducted under the direction of Drs. Piersol and Armstrong.

During the year a Weppler fluoroscope for X-ray work and a Weppler stereoscope were installed. These are to be used as an adjunct in the teaching of gross anatomy. Work has begun on the development of an anatomical museum, and the services of Dr. B. Guyatt have been secured as museum curator. A departmental library has also been established.

Research work has been carried on, which will be described in detail in another portion of the President's report. Dr. Mary Tom has continued her good work as research technician.

We record with regret the retirement of George Lynn, who has been compelled, through illness, to relinquish his duties as laboratory assistant after thirty-five years of faithful service.

Department of Physiology:—Certain changes were made in the conduct of the course in Physiology. Lectures were introduced into the last few weeks of the session in the second year, with the object of giving the student a general knowledge of the subject before proceeding to the main study of Physiology in the third year. It was also hoped, by this means, to stimulate the student to undertake reading during the summer. A series of six lectures on the clinical application of physiology was given to students of the third year, and a course of lectures in Applied Physiology was given to the students of the sixth year, in collaboration with the departments of Medicine and Pathology.

There are at present six full-time instructors and seven part-time instructors on the staff, five of the latter being also attached to the medical clinic. It is hoped that in the future more time may be available for research for certain of the more senior instructors.

The option in the history of Physiology was taken by 29 students and that in advanced Physiology by 9 students of the fourth and fifth years.

Several members of the staff have been engaged in some research problem during the year. A large part of this work has been on the physiological action of insulin and carbohydrate metabolism. Two fellows of the Rockefeller Foundation have participated in this work, Dr. Ladislav Karczag from Budapest and Dr. Max Tiitse from Dorpat, Esthonia. Work has also been done on the hormone of the parathyroid gland, and the results of Dr. J. B. Collip with regard to the action of this hormone on laboratory animals have been confirmed.

Department of Biochemistry:—The staff has been augmented by the appointment of Dr. G. S. Eadie as an additional demonstrator. While this has improved the situation, it still becomes necessary for efficiency to appoint at least one more teacher above the rank of fellow. The Department is called upon to teach students in various courses, such as Biology, the B. & M. course, Household Science, Household Economics, Chemistry, the D.P.H. course, and in Botany. Each group of students should receive special instruction adapted to its particular training and requirements, and a special instructor of considerable experience should be assigned to all non-medical students.

The main work of the Department will, of course, continue to be that of instruction to medical students. During the past session the course in Biochemistry has begun in the last ten weeks of the second year instead of in the third year as formerly.

There have been registered with the Department during the session fourteen graduate students, of whom eight have Biochemistry as their sole or their major subject of study. Eleven members of the staff, graduate students and others have been engaged during the year in research work. The subjects investigated and the results obtained, and the papers published are mentioned in another portion of the President's report.

With the object of stimulating interest in biochemical research and of bringing together in periodical conference the workers in that field, the Department has instituted this year a regular seminar in Biochemistry. In this undertaking, as in many other less formal ways, it has enjoyed the co-operation and support of the Department of Zymology. It is believed that to the junior workers in both Departments the seminar has been of very considerable benefit.

Department of Pharmacy and Pharmacology:—The work of the Department has been carried on satisfactorily, although the lack of a good second in command has been felt. Fortunately the services of Dr. Sharpe, formerly assistant-professor, were available for certain of the teaching hours.

Research work has been conducted throughout the session. Dr. R. W. Graham has concluded an investigation on the pharmacological action of morphine. Dr. Easson Brown, part-time Fellow in Therapeutics, in collaboration with Mr. L. J. Bonham, has conducted investigations regarding anaesthetic gases. The head of the Department has studied the peristaltic mechanism of the intestine. Papers published from the Department show that considerable attention has been given to the incidence of industrial diseases in the Province and the necessity of the better control of the purity of drugs used by the profession.

The Department has suffered both in teaching and research from lack of adequate floor space. Dr. Banting and his associates were provided for, resulting in an increased tax upon the available accommodation. It is hoped that, in the near future, the situation will be relieved, by ample provision both for the Department of Phramacology and for that under the control of Dr. Banting.

Department of Pathology and Bacteriology:—At the beginning of the session Dr. W. L. Holman was appointed associate professor of Bacteriology. He organized a most satisfactory course in that subject. Dr. W. L. Robinson was advanced to the status of assistant professor in Pathology. Dr. H. K.

Detweiler, who has been in charge of the work in Serology, has been recommended for appointment as associate director of Serology.

Changes in the curriculum of study have been made whereby the fourth year receive instruction both in general and special Pathology; the bulk of their studies in these subjects will be completed in that year. In the fifth year special topics in systematic Pathology are continued along with instruction in post mortem pathology. For the sixth year there is a conference in Pathology each week, which has proved of great value. It is believed that this conference can be further enlarged with advantage to include, on occasion, clinicians and other laboratory workers.

The museum instruction in the Department has been entirely carried on in association with the studies in microscopic pathology by the students. Each student has over 450 sets of slides for microscopic study demonstrating lesions appearing in diseases encountered in the wards.

During the year the new autopsy room was put in commission. This has provided unusual advantage both for the study of gross pathology and for the production of satisfactory autopsy records.

The Department has had the advantage of the co-operation of various junior assistants from the clinical departments who have undertaken examination of materials from the clinic, under the supervision of the Department of Pathology. This has led to a happy co-operation with a number of the clinical departments, to the great advantage of each. It is hoped this co-operative work will be extended.

Further progress has been made in welding together the component elements within the Department of Pathology and Bacteriology whereby the subdivisions, in which routine diagnoses are made, are brought in closer harmony with the academic and research divisions.

Four Fellows within the Department have undertaken problems in research. The results of their respective activities will appear in the scientific journals.

The members of the Department, in co-operation with others, have organized a society for research pathology. The purpose of this organization, which meets once a month, is to present the results of individual research and to be an outlet for the scientific studies which are often too technical to bring before other medical societies.

Department of Pathological Chemistry:—There have been some new departures in teaching. In the fourth year the laboratory work has been revised and a course in the more recent methods of blood analysis has been introduced. The methods taught should be of immediate value to the practitioner. Larger equipment and closer supervision of work will be necessary to make effective the teaching of accurate analytical methods to such large classes.

The association of this Department with that of Obstetrics in the study of the toxaemias of pregnancy has been continued with valuable results, both from the standpoint of practical medicine and as a contribution to pure science. Immediate practical results have been obtained in the treatment of "pre-eclampsia." New facts have also been discovered on the occurrence and significance of uric acid in blood, having an important bearing in other branches of medicine.

Department of Hygiene and Preventive Medicine:—The staff of this Department for the past session has consisted of ten members, four of whom were on a part-time basis. Leave of absence was granted to Dr. R. R. McClenahan on account of illness. After several years of most efficient service he has been compelled to stop work. Miss Mary Cowan has been appointed a demonstrator in Hygiene and Preventive Medicine, and Dr. J. P. Moloney has been promoted to the rank of assistant professor in Hygiene. Dr. Cruickshank has been made demonstrator in Hygiene. Miss Marion Maitland has been promoted from class assistant to assistant demonstrator in Hygiene.

There were forty-one students enrolled in graduate courses, of whom thirty-two were proceeding to the Diploma of Public Health Nursing, eight to the Diploma of Public Health, one to the degree of M.A., and one to the degree of Ph.D.

In the undergraduate courses there were 185 students in the fifth year of Medicine, 35 in Social Service, 21 in Household Science, 3 in Engineering and Applied Science, and 4 were taking the Hygiene option.

Laboratory, lecture courses and field work were arranged for 200 students. The generous co-operation of the Provincial Department of Health and the Health Department of the City made this possible. It has thus been possible to provide facilities for practical work in preventive medicine and public health, which are as essential as are clinical facilities for undergraduate instruction in medicine.

It is hoped that at the beginning of the session 1926-1927 the new School of Hygiene in the University of Toronto will be opened. Reference is made elsewhere in this report to that project.

The members of the staff of this Department are also on the staff of the Connaught Laboratories. A report of the various researches undertaken by them appears elsewhere in the report of the Director of the Connaught Laboratories.

Instruction in the preliminary science departments of Biology, Chemistry and Physics is carried on most advantageously and efficiently for the training of undergraduates in medicine; special courses in these departments are adapted to the requirements of medical students and continue to be of the highest possible value in their training.

The Department of Radiology, which was organized three years ago, is giving instruction in both the fifth and sixth years. In addition to this graduate work is carried on in the Department. In the session just closed two students have proceeded to the Diploma in Radiology after an intensive course both in the Department of Radiology and in the Department of Physics of the University.

Graduate Study:—An increasing amount of graduate work is carried on from year to year in this Faculty. Reference has already been made to many of these activities, in recording the work of individual departments, in a former part of this report. A special committee is authorized to arrange courses for those graduates who apply for specific facilities for work. These courses are conducted not only in the various laboratories but also in the clinical departments.

Extension Lectures:—For the past few years extension lectures have been provided in conjunction with the Ontario Medical Association. Lectures, demonstrations and clinics have been given to groups of practitioners in various parts of the Province. During the past session 121 such communications were made by different members of the staff of this Faculty to medical societies of Toronto.

Research:—The President's report will contain a detailed statement of research carried on in this University, including research engaged in by members of the staff in the Faculty of Medicine. Reference has already been made to the work being done in individual departments. The equipment and the facilities for research are steadily increasing. Various Scholarships and Fellowships are available for research. The most recent addition to our resources in this regard has been due to the generosity of Dr. A. H. Freeland Barbour of Edinburgh, the original donor of the "George Brown Memorial Scholarship." Dr. Barbour, by a gift of £1000, has doubled the amount of the original benefaction and has thus made a very valuable scholarship available for workers in the field of research.

(3) ANNUAL REPORT OF THE DEAN OF THE FACULTY OF APPLIED SCIENCE AND ENGINEERING

(C. H. Mitchell, Esq., LL.D., D.Eng.)

The Instructional and Research work carried out in the Faculty of Applied Science and Engineering during the session now closed has been most satisfactory.

While the number of students in attendance in this faculty has fallen below five hundred, considerable advantage has been found in the greater teaching facility, permitting more intensive work on the part of the staff and students alike. This has resulted in a higher standard of excellence in the instruction.

The full effect of the higher matriculation standard is now being felt, and we are getting a much better prepared class of student. This has been manifested in the results of the first year examinations this year, wherein the failures were only about eight per cent. as against fifteen to twenty per cent. five years ago. The same may be said, too, of the second year, which also had the benefit of the higher matriculation requirement.

The decrease in numbers in attendance in this faculty is, I consider, accounted for not only by the higher standard but by the general conditions in the country and in the engineering profession, in many of its various branches, in which there is not the marked demand that there was in the years following the war.

It is gratifying, however, to observe that the graduating class has been very well absorbed into the professional and business life of the country, and a comparatively small number, not more than about fifteen or twenty per cent., have gone to the United States for employment. I attribute this mainly to the well-organized work done here the past two years in connection with graduate employment, and I strongly urge that facilities be provided to enable this to be continued. It is with the greatest regret that I learn that financial provision for this has not been made for the coming year.

The spirit of staff and students alike has been excellent. Hearty co-operation has been continued in connection with those features of student activities which made for good discipline and student government.

Research work has been carried on in a highly satisfactory manner, and the diversity of subjects in the various departments and the excellence of results have been marked. The organization and management of this in its various details, by means of the Committee of the School of Engineering Research and through the able work of Dr. Boswell as secretary, have continued excellent and again demonstrate the advantage of prosecuting Faculty research work by this means.

Exchange of lectures with other Universities, the co-operation of representatives from several branches of the profession by graduates and others in lectures and demonstrations, the attendance of members of the staff at conferences and conventions on Engineering education and at various professional meetings, have all contributed to the enlarged interest in the work of the session.

A strong committee of the Facuity Staff has been working during the year in co-operation with the main committee of the Society for the Promotion of Engineering Education, which is investigating the whole question of this field of education, and much valueable information has been gained not only about our own work and graduates, but in respect to other institutions. The results of this inquiry will doubtless be available during the coming session and may form the basis for further progress and development in engineering education.

A notable feature of the session has been the inauguration of instruction in the branch of Ceramics, which will be carried on in the Department of Metallurgical Engineering. This has been long desired, and has been made possible

by the generous financial help of the Canadian Clay Products Association, who initiated the movement within the industry. Great attention, in both Canada and the United States, has been directed toward this University on entering this new field.

In the matter of equipment, it is with great satisfaction that we can now make preparation to purchase and install the new 200 ton testing machine in the Strength of Materials Laboratory. This has been long needed and replaces with a more modern and powerful machine the present one which has been in use for thirty-five years. We have also to acknowledge gifts of valuable apparatus, mostly in the Electrical Laboratories, from Canadian manufacturing companies.

We have also to acknowledge further scholarships, which will materially increase the incentive to attainment by the students. In addition to the three valuable Alumni Memorial Scholarships now allotted to this Faculty, Messrs. Jenkins Bros. Limited have established a generous scholarship in the third year.

(4) REPORT OF THE DEAN OF THE ONTARIO COLLEGE OF EDUCATION

(Professor P. Sandiford, Acting Dean)

There was an increase of 34 in the registration for the High School Assistants' course, which taxed both the capacity of the buildings and the strength of the staff. It is becoming increasingly difficult to provide facilities for an adequate training in the practice of teaching. The wide area from which our students are drawn shows no sign of diminishing. Manitoba sent us ten students last year and Saskatchewan seven.

The graduate work in pedagogy continues to attract students from all parts of the Dominion. The time seems to have arrived when the University can legitimately demand a year's continuous residence from all candidates wishing to secure the D.Paed. degree. The College of Education appears destined to play for Canada the part that Teachers' College plays for the United States. This being the case, fitness to direct research will have to be considered in making new appointments to the College staff.

The problem of playground space for the pupils of the University Schools and the students of the College of Education—a perplexing one for many years—has been solved by the acquisition of the Aura Lee grounds. When the necessary repairs and alterations have been completed, the University Schools and the College of Education will be in possession of an equipment for open-air games, which cannot fail to bring in rich returns.

Dean Pakenham, having completed a term of nineteen years' continuous service, was given a well-earned leave of absence from the end of February to the close of the Session. His studies of the educational systems of France and England will be of immense benefit not only to his students in courses of Educational Administration, but to the College as a whole.

(5) REPORT OF THE DEAN OF THE FACULTY OF FORESTRY

(Dr. C. D. Howe)

During this session there were at the Faculty of Forestry exactly the same number of students as last year, namely, 43. The graduating class consisted of 12 men, of whom 9 were granted the degree of B.Sc.F. at the June Commencement, two had the degree deferred and one student failed to make the year.

It is to be noted that of the 43 students in attendance 5 came from beyond the shores of North America, showing that Canada is attracting men from other parts of the Empire who desire to enter the profession in this country, and that the School is known beyond the bounds of our own Province, which brought to us 33 students, 18 of whom are from the city of Toronto.

Three sessions have passed since the entrance requirements for the Faculty were raised from Junior to Senior Matriculation, and the higher standard is reflected in a smaller percentage of failures and conditions in the earlier years of the course.

A successful camp was held last October with the incoming Fourth Year, under the direction of Professors Dwight and Millar, at Achray, in Algonquin Park, where the students were given practical experience in surveying, building telephone lines, making growth and yield studies and in comparing the amount of white pine regeneration on burned areas of various ages.

The Third Year class had one week's practical work in Silviculture under Dr. White at the Ontario Forest Station and Nursery at St. Williams in April. The oldest plantations there are fifteen years old and they are rapidly assuming the aspect of real forests. Thinnings are already being made and the product is used for fuel and posts. The nursery contains around 16 million seedlings and transplants. Close to 6 million young trees are distributed to various parts of the Province from this nursery each year.

There were many calls this spring for undergraduate students for work during the summer vacation. The Ontario Forestry Branch is using 26 men on forest survey work in the district south of the transcontinental railway line and midway between Hearst and Cochrane. The Dominion Forestry Branch is employing one First Year man and the British Columbia Forest Branch one Third Year man. Private pulp and paper or lumber companies have taken two undergraduates. But the present depressed state of business conditions is reflected in the employment of our graduates. Though all the men in the graduating year are employed on forestry work this summer, not all these positions are permanent. Of the 12 men in the graduating class 8 are in private employment and 4 in government service.

For many years past we have made an annual plea in this report for consideration by the Government of the urgency for this Faculty of a proper building with adequate and modern facilities. It is with much appreciation on the part of the staff and of the student body that in place of that plea this year we are able to express our gratitude to the Board of Governors and to the Government for the fine building at present being erected on St. George Street, and which we expect to occupy during the coming session of 1925-26. We hope to be able there to render larger service by widening the scope of our work through post-graduate courses and through short courses for special purposes.

(6) REPORT OF THE DEAN OF THE FACULTY OF MUSIC

(Dr. A. S. Vogt)

The number of students registering in the Faculty of Music during the season totalled 63 against 56 for 1923-1924. The season's enrolment was distributed as follows: In the courses leading to the degree of Bachelor of Music: First Year, 33; Second Year, 18; and Third Year, 11. One student registered in the courses leading to the degree of Doctor of Music.

During the session the subjects of the lectures delivered by the lecturers in the Faculty of Music were as follows:

HEALEY WILLAN, Esq., Mus.Doc., F.R.C.O.:
Theory of Music:
January 12—"The Common Chord, its Inversions and Treatment."
January 26—"Chords of the Seventh."
February 9—"Modulation."
February 23—"Harmonization of Melodies."
March 9—"Counterpoint in combined Species."
March 23—"Imitation and Canon."

ALBERT HAM, Esq., Mus.Doc., F.R.C.O.:
Church Music:
January 9—"Bach's Predecessors, and their Influence on Church Cantata."
January 23—"The Early Chorals."
February 6 } "The Sonata and its Form."
February 13 }

F. A. MOURÉ, Esq., Mus.Doc.:
History of Music:
January 19 } "The Genesis and Development of the Music-Drama."
February 2 }
February 16—"Berlioz and his Career."
March 2—"Music in America."

H. A. FRICKER, Esq., M.A., Mus.Doc., F.R.C.O.:
Choral and Instrumental Music:
January 16 } "Tudor Church Music."
January 30 }
February 20 } "The Dream of Gerontius."—Elgar.
February 27 }

E. F. BURTON, Esq., B.A., Ph.D.:
Acoustics:
March 6—"Production and Propagation of Sound by vibrational Motion."
March 13—"Scientific Determination of Standards of Pitch."
March 16—"The Motion of Air in Organ Pipes"; "The Stationary Wave."
March 20—"The physical Aspect of the Quality of a Musical Note."

The season again witnessed a large increase in the number of candidates registering for the Local Examinations of the Toronto Conservatory of Music—the enrolment for the year totalling 15,415. This compares with a total of 12,115 for the season 1923-1924. A considerable portion of this large increase has undoubtedly resulted from the amalgamation of the Canadian Academy of Music with the Conservatory, which came into effect at the beginning of the Conservatory's academic season, September 1st, 1924. Entries for this year's Conservatory's Local Examinations were distributed as follows: Piano, 10,484; Organ, 22; Singing, 451; Violin, 593; Sight-Singing, 88; Theory of Music (Rudiments, Harmony, Counterpoint, etc.), 3,776; 'Cello, 1.

The fine series of Convocation Hall Organ Recitals by the University Organist, Dr. F. A. Mouré, fully maintained the high artistic standards set by Dr. Mouré in his recitals of previous seasons. Admirably-chosen programmes, representative of the best in the repertory of music for the organ, combined with brilliant models of performance, made important contributions to the musical life of the University and attracted large and warmly interested audiences of students and others.

The Nine o'clock Sunday Evening Hart House Recitals again won the enthusiastic approval of the hundreds of students crowding the recital hall at each performance of the series. As in former seasons, many of the leading artists of the city contributed their services to this important cycle of recitals. The performances stand out prominently amongst the finest given in Toronto during the season.

An event of unusual interest was the first appearance of the University of Toronto Choral Society under the baton of Dr. Healey Willan in a well-balanced programme made up largely of representative *a capella* choruses. The Society revealed a warm musical tone and sang with real distinction of style throughout, reflecting great credit on all concerned.

(7) REPORT OF THE DEAN OF THE SCHOOL OF GRADUATE STUDIES

(Professor J. Playfair McMurrich, LL.D.)

During the past year the number of students registered in the School of Graduate Studies was 341, less five duplicate registrations. Of these 272 were residents of the Province of Ontario, 6 of Nova Scotia, 1 of Prince Edward Island, 2 of Quebec, 7 of Manitoba, 10 of Saskatchewan, 8 of Alberta, 13 of British Columbia, 4 of the United States, 15 of Great Britain and overseas dominions and 3 from foreign countries. The University of Toronto was responsible for the undergraduate training of 248, 73 coming from other Canadian Universities, 12 from other Universities of the Empire and 8 from foreign institutions. 74 held staff appointments in the University of Toronto.

The distribution of students in the various Departments, according to the subject chosen as the major study, was as follows: Architecture, 2; Astronomy, 1; Biochemistry, 9; Biology, 7; Botany, 11; Chemical Engineering, 6; Chemistry, 25; Civil Engineering, 5; Classics, 9; Electrical Engineering, 1; English, 46; Food Chemistry, 2; Forestry, 1; Geology, 5; German, 2; History, 15; Household Science, 3; Hygiene, 2; Mathematics, 10; Medicine, 1; Metallurgy, 2; Mineralogy, 4; Mining Engineering, 2; Pathology, 1; Pathological Chemistry, 2; Pedagogy, 57; Pharmacology, 2; Philosophy, 18; Physics, 16; Physiology, 6; Political Science, 28; Psychology, 10; Romance Languages, 17; Semitic Languages, 4; Surgery, 1; Theory of Education, 4; Zymology, 3.

The degrees sought are shown in the following table:

Candidates for the degree of Ph.D.	69
Candidates for the degree of M.A.	139
Candidates for the degree of M.D.	2
Candidates for the degree of Ch.M.	1
Candidates for the degree of M.A.Sc.	10
Candidates for the degree of M.Arch.	2
Candidates for the degree of C.E.	3
Candidates for the degree of E.E.	1
Candidates for the degree of Chem.E.	2
Candidates for the degree of D.Paed.	57
Candidates for the degree of F.E.	1

During the year 13 students completed the requirements for the degree of Ph.D.; 70, those for the degree of M.A.; 9, those for the degree of M.A.Sc.; 2, those for the degree of M.Arch.; 2, those for the degree of C.E.; 1, those for the degree of E.E.; 1, those for the degree of Chem.E.; and 1, those for the degree of F.E.

The titles of the theses submitted for the degree of Ph.D. were:

D. S. AINSLIE: "Miscellaneous Researches on Magnetic devices and Spectroscopy."
MISS E. V. EASTCOTT: "The Biogens and their relation to the two Bioses."
MISS H. E. FISHER: "Professional Associations in Canada."
A. H. GEE: "The Influence of Sodium Chloride and other Salts on the Growth and Metabolism of Yeast."
A. R. GORDON: "Polarization and Concentration change at the Electrode."
W. B. KERR: "The Reign of Terror in France."
A. LACEY: "The Romantic Drama in France considered in relationship with the Melodrama of the early Nineteenth Century."
E. H. MOSS: "Uredinia and Haustoria of the Pucciniastreae."
J. A. NICHOLSON: "The Philosophical Teaching of L. T. Hobhouse."
W. N. SAGE: "Sir James Douglas and British Columbia."
D. A. SCOTT: "The Chemical and Biochemical behaviour of Insulin."

P. A. W. WALLACE: "Shakespeare and His Printers."
A. M. WYNNE: "The Influence of Acids on the Growth and Metabolism of the Bacillus granulobacter Pectinovorum."

Seven fellowships for graduate students have been provided for the Session 1925-1926 by the generosity of the Canadian Pacific Railway, the Imperial Oil Company, Sir Edward Kemp, Colonel R. W. Leonard and the Robert Simpson Company. The following are the appointments to these fellowships, together with the Universities from which the appointees graduated and the departments in which they will pursue their major studies:

Miss M. M. Morrison, M.A., Dalhousie, Philosophy.
Miss G. M. Wall, B.A., Mt. Allison, Classics.
Miss D. Blakey, M.A., British Columbia, English.
Miss L. H. Murray, B.A., Saskatchewan, English.
K. W. Folley, M.Sc., Saskatchewan, Mathematics.
G. Cosgrave, B.A., Manitoba, Psychology.
W. F. Baker, B.A., M.Sc., Manitoba, Geology.

The Alexander Mackenzie Fellowships in History and Political Science have been awarded to:

H. J. Stephenson, B.A., Manitoba, History.
E. A. Beecroft, B.A., Toronto, Political Science.

The James H. Richardson Research Fellowship in Anatomy has been awarded to:

Miss C. H. Craw.

The George Brown Memorial Fellowship has been awarded to:

J. H. Couch, B.A., M.B.

The Ellen Mickle Fellowship has been awarded to:

C. H. Best, M.A., M.B.

The Nipissing Mining Company Research Fellowship was held during the year by John Beattie, B.A.Sc.

(8) REPORT ON RESEARCH

Anatomy, under Direction of Professor J. P. McMurrich

During the past year additional work thrown upon the staff interfered somewhat with the researches in progress in this Department.

I. Dr. Watt has made some progress with his studies of the deposition of lime salts in various tissues, and expects to continue this investigation during the coming vacation.

II. Dr. Herbert Willson has completed his models of the respiratory trees of the Opossum and of a Monotreme, a study of which, it is hoped, will throw some light upon the evolution of the fundamental structure of the Mammalian lung.

III. Dr. Linell has been most active in investigation and at present has in hand studies upon the following problems:

1. The production of Otitis media in rabbits (in collaboration with Dr. Burnham).

2. The production of Papilloedema (Choke-Disc) in cats (in collaboration with Dr. K. G. McKenzie).

3. The production and histological investigation of infected peripheral nerve wounds.

In addition he has studied the histology of a number of cases of pathological conditions of the central nervous system, sent to this Laboratory from several of the City Hospitals. Some of these cases were studied with the collaboration of Drs. Klotz and Magner and one with that of Dr. K. G. McKenzie.

IV. Dr. Tom has made some progress in the construction of a model of the peritoneum in an early human embryo.

Biochemistry, under Direction of Professor A. Hunter

Dr. Hunter has continued the work upon the kinetics of the action of arginase commenced by Mr. J. A. Morrell. The results obtained have proved to be of unusual interest from the point of view of enzyme action in general. The relation between hydrogen ion concentration and enzyme activity is found to be of a type not hitherto observed. An empirical equation has been found which describes accurately the time-course of the reaction, and this has been shown to be interpretable in terms of the recent theory of Michaelis.

Mr. Dauphinée has continued his study of the use of arginase in the quantitative determination of arginine. He has shown that the method may be employed to determine the arginine content of proteins; and has applied it, with extremely unexpected and interesting results, to a study of the rate at which arginine is liberated in the tryptic digestion of proteins.

Mr. Geddes has made a study of the preparation, properties and behaviour of an enzyme in yeast which converts asparagine into aspartic acid and ammonia.

Dr. Eadie has been engaged in an examination of the chemical composition of pollens, with special reference to their content of proteins. He has also made a redetermination of the dissociation constants of creatine and creatinine.

Miss McFarlane has completed her study of the sequence in which the hydrolytic products of peptic action appear in the course of hydrolysis.

Miss V. Dunbar has succeeded in showing that metaprotein is not a product of peptic hydrolysis of albumen. She has demonstrated, in fact, an inhibitory action of pepsin on the production of metaprotein by acid.

Dr. A. M. Goulding has shown that the autodestruction of pepsin is a function of its ionization.

Mr. C. A. Morrell has demonstrated for the first time the influence of the backward reaction in protein hydrolysis.

Dr. Wasteneys and Dr. Borsook have studied the mechanism of tissue deamination, and have demonstrated an interesting effect of glucose on this reaction.

Biology, under Direction of Professor B. A. Bensley

Following is a summary of studies carried on or directed by members of the staff of the Department of Biology during 1924-25:

E. M. Walker, North American species of *Somatochlora*, Odonata of Nipigon region; in collaboration with N. Ford, studies on *Grylloblatta*.

Marine biology, under supervision of A. G. Huntsman: A. H. Leim, experimental factors in development of fish eggs; V. Davidson, autumn maximal growth of diatoms; R. H. McGonigle, relation of *Teredo* to environmental factors; G. G. Duff, phases of life history of cod; A. W. Needler, fisheries data; W. M. Anderson, water sample titrations.

A. F. Coventry, unequal twinning.

J. W. MacArthur, data on hemophilia and finger abnormalities, genetics of tomato, sex-linkage studies in poultry, genetics of barley, genetics of gladioli; in collaboration with Mr. Bird, genetics of root crops.

J. W. MacArthur and W. H. T. Baillie, environmental factors of *Daphnia magna*.

W. H. T. Baillie, effects of habit and posture on bony processes in relation to muscular pull, blood reactions in lower animals.

J. R. Dymond, Lake Nipigon fishes.

E. H. Craigie, changes in vascularity of brain stem and cerebellum, measure-

ment of capillaries in cerebral cortex, anatomy of central nervous system in albino rat.

W. J. K. Harkness, practical hatching of sturgeon, studies on embryology of sturgeon. Under supervision of W. J. K. Harkness; J. L. Hart, preliminary study of life history phases of whitefish; H. H. MacKay and D. S. Rawson, fresh water plankton; A. K. Leonard, ecology of brook trout; A. L. Pritchard, aquatic plants of Lake Nipigon.

N. Ford, studies on behaviour and metabolic activities of *Grylloblatta*, respiratory exchange, taxonomy of pseudo-scorpions of Canada.

N. K. Bigelow, ecological distribution of microscopic organisms in Lake Nipigon.

L. L. Snyder, Crawford collection from Wrangel Island.

E. B. Logier, Amphibia and Reptilia of Lake Nipigon region.

Geology, under Direction of Professor W. A. Parks

A. By Professor A. P. Coleman (Professor Emeritus):
(1) Glacial studies in Newfoundland and Gaspé.

B. By or under the direction of Professor W. A. Parks:
(2) Collecting expedition to the Red Deer River, Alberta.
(3) Examination of Pleistocene deposits in Saskatchewan.
(4) Descriptions of new species of dinosaurs from Alberta.
(5) Description of a new species of Antilocapra.
(6) Detailed geology and palaeontology of the Workman's Brook section of the Upper Ordovician of Ontario—Miss M. Fritz.
(7) Study of the chert beds of the Lockport formation at Hamilton, Ontario—R. Thomson.

C. By or under the direction of Professor E. S. Moore:
(8) Geology of the Mississagi and Goulais River iron-range district, Ontario.
(9) Algal deposits in the Animikie rocks of the Port Arthur district.
(10) The source of the iron in the rocks of the Gibson Iron Syndicate claims.
(11) Michipicoten district, Ontario—G. B. Langford.
(12) The microscopic structure of coals of western Canada—I. W. Jones.
(13) The microscopic structure of the anthraxolite of the Sudbury district, Ontario—S. F. Kelly.

D. By Professor A. MacLean:
(14) Studies of the rock structure in the Kirkland Lake gold field.

Botany, under Direction of Professor J. H. Faull

I. Cryptogamic Botany, Mycology and Pathology.
(Under the direction of Professor J. H. Faull.)

Chamberlain, G. C.
(1) Field and laboratory studies on apple scab.

Darker, G. D.
(2) A continuation of morphological, cultural and taxonomic studies on the "needle cast" fungi of conifers.

Faull, J. H.
(3) An investigation of "red stain" in Jack pine. Field and laboratory studies have been made, especially on the relation of the age of Jack pine to its susceptibility to this disease.
(4) Life history studies on the Pucciniastreae.

Faull, J. H. and W. R. Watson
(5) Fern rusts. I. The genus Milesina.
Faull, J. H and G. D. Darker
(6) Fern rusts. II. The genus Hyalopsora.
Faull, J. H and Miss L. M. Hunter
(7) The spermogonia of the Pucciniastreae.
Fritz, C. W.
(8) Various culture studies on timber destroying fungi.
Hamilton, J. M.
(9) Field tests on the value of inoculated sulphur as a preventive of potato scab.
Moss, E. H.
(10) The uredinia and the haustoria of the Pucciniastreae. Completed and presented as a doctorate thesis.
Riley, C. G.
(11) Studies on the "ring shake fungus" Trametes Pini.
Walker, A. R.
(12) Effect of various environmental factors on Botrytus spec.
Duff, G. H. and H. N. Racicot.

II. Plant Physiology (under the direction of Professor G. H. Duff)

(13) Growth Relations in *Phaseolus vulgaris* I.

This series of studies was begun in 1922, and the first chapter has now been completed and awaits publication. The experiments have had as their object the quantitative analysis of growth in this species and an examination of the correlations between the various organs of the plant under specific conditions. The results presented in this paper followed from two lines of investigation:

(1) The study of certain standard quantitative relations obtaining in the normal plant.

(2) The same relationships as they appear in plants in which the leaf area has been artificially reduced.

Duff, G. H.

(14) Growth relations in *Phaseolus vulgaris*, II, III and IV.

The experimental work of the succeeding chapters of this series is now in progress and is being directed into three channels which deal with:

Chapter (II)—The mechanism underlying the correlation between the production of flowers and of fruit on the one hand, and the occurrence of subsidiary maxima in the Relative Growth Rate curve and the assimilation curve on the other.

Chapter (III)—The effect upon subsequent growth relations of the intensity of certain environmental factors obtaining during the period of germination and reflected in the growth curve of the germination cycle.

Chapter (IV)—The effect upon the growth relationships of various full nutrient solutions, and of solutions deficient in certain essential elements.

Duff, G. H., C. S. Hanes and Miss F. L. Haines

(15) The Metabolism of Excised Plant Organs Growing in Artificial Culture Media.

In these experiments Robbins' technique for the *in vitro* cultivation of excised plant organs has been adapted to the requirements of a study of the metabolism of these organs. Metabolic transformations are studied by following changes in the various constituents of the culture medium instead of in the plant tissues themselves, a procedure not heretofore applied in the case of higher plant tissues, and which eliminates the effects of autolysis. The results of the preliminary experiments clearly indicate that this method will yield valuable information concerning carbohydrate and nitrogenous metabolism in the higher

plants, free from many objections attaching to earlier work in which autolytic changes are involved.

Hamilton, J. M.

(16) Metabolism in *Sclerotinia cinerea*.

An investigation of the conditions of growth and of the products formed from certain substrates of growth by this economically important fungus. It is intended as a preliminary to a study of the decompositions effected by Sclerotinia in the fleshy parts of stone fruits, and of the physiological condition of fruits which promote infection and decay.

PUBLICATIONS

1. Faull, J. H., in collaboration with H. T. Gussow.
   Plant Pathology in Canada. Handbook of B.A.A.S., 1924.
2. Thomson, R. B. and H. B. Sifton.

Phanerogamic Botany, Œcology and Genetics and Plant Breeding, under the Direction of Professors R. B. Thomson and H. B. Sifton

C. S. Hanes was awarded the 1851 Exhibition Scholarship.

Miss E. R. L. Reed, B.Sc., Lecturer on Botany in the University of Western Australia (Perth), is on exchange with Dr. J. Gertrude Wright, of this University, an arrangement which, it is hoped, will be of advantage not only to themselves but to their respective Universities.

(*a*) *Phanerogamic Botany*

Ansley, J. W.
The distribution of primary resin canals in the pines.

Hanes, C. S.
The distribution of primary resin canals in the Gymnosperms and the biochemistry of resin production.

Hart, N. C.
The origin of resin canals in the wood of the pines.

Reed, Miss E. R. L.
The Anatomy of the Seedling of Araucarians.

Sifton, H. B.
Anatomical study of *Cicuta maculata* (cowbane).

Simpson, A.
Records of the growth of plants, their hardiness, adaptability to local conditions, and methods of propagation.

Thomson, R. B. and Reed, Miss E. R. L.
Tangential Pitting.

Thomson, R. B. and Sifton, H. B.
Resin Canals of Tamarack.
Wound reactions of *Sequoia*, *Abies* and *Larix*.
The determination of the season of maximum response to wounding.
The stimulation of resin production by chemical means.

(*b*) *Œcology*

McConkey, O.
Some factors influencing production in the Oat.

Sifton, H. B.
The physiology and œcology of germination.

Thomson, R. B. and Sifton, H. B.
The structure of the primary wood and cortex of the root in relation to environmental factors.

(*c*) *Genetics and Plant Breeding*

Bird, J. N.
Genetics of the shape and colour in radishes, etc.

Partridge, J. A.
The perennial and annual habits in crosses.

Thomson, R. B. and Partridge, J. A.
The peculiar peloric linaria.

Chemistry, under Direction of Professor W. Lash Miller

Twenty-eight students were engaged in research last winter under the direction of the professors of this department.

The degree of Doctor of Philosophy was awarded to two of them, viz.: Miss E. V. Eastcott (*On the occurrence of the two Bioses in animal and vegetable products, and on the Biogens, inactive mother-substances of the Bioses*), and Mr. A. R. Gordon (*The electrolysis of copper salts with varying currents, and the two species of cathodic over-voltage*). Two other honour graduates in Chemistry, viz., Mr. A. H. Gee and Mr. D. A. Scott were awarded the degree of Doctor of Philosophy from other departments of the University

Eight obtained the degree of Master of Arts, viz.: Messrs. J. Cryer, H. R. Hugill, O. C. H. Kitching, H. desB. Sims, C. W. Small, E. M. Sparling, R. B. Walker, and Miss D. Whiteman.

The following were the subjects of research:

N. C. Cahoon:—The preparation of Bios I.
N. D. Clare, M.Sc.:—Supersaturation of gases in liquids.
J. Cryer, B.A.:—Acetyl derivatives of organic acids with benzene and aluminium chloride.
Miss E. V. Eastcott, M.A.:—The Biogens, inactive mother-substances of the two Bioses.
F. J. Farncomb:—Initiation of bubbles in supersaturated solutions of gases.
C. Q. Glassey:—Determinations of vapour composition with the interferometer.
A. R. Gordon, M.A.:—Cathodic over-voltage in solutions of copper salts.
J. D. Garrard, M.A.:—Distribution of colloidal gold between two liquids.
H. R. Hugill, B.A.:—The effect of varying current and concentration on the polarization in a lead accumulator.
C. M. Jephcott, M.A.:—Quinolinic anhydride with aromatic hydrocarbons and aluminium hydrochloride.
R. S. Kerr:—Electrical conductivity of magnesia refractories at high temperatures.
E. J. King, M.A.:—The reaction of lactones with aromatic hydrocarbons and aluminium chloride.
O. H. C. Kitching, B.A.:—The light-scattering of "abnormal" liquids.
M. J. Mulligan, B.A.:—Electrolysis of soda-lime glass.
R. S. Prosser, M.A.:—Aromatic anhydrides with hydrocarbons and aluminium chloride.
R. R. Rogers:—Potential difference over carbon arcs.
H. J. Rose:—The system $Na_2SO_4 - NaCl - MgSO_4 - MgCl_2 - H_2O$.
H. desB. Sims, B.A.:—Preparation and purification of Bios I.
E. M. Sparling, B.A.:—Chemical behaviour of Bios II.
C. W. Sweitzer, M.A.:—The light-scattering of salt solutions.
R. B. Walker, B.A.:—Oscillograms of carbon arcs with arbitrarily varied currents.
C. Weber:—E.M.F. at the boundary between two solutions of copper sulphate in strong sulphuric acid.
Miss D. Whiteman, B.Sc.:—Reproduction of yeast in solutions to which no Bios has been added.

Food Chemistry, under Direction of Professor C. C. Benson

The research work undertaken in this department during the past year has been concerned with problems of metabolism and the purification of Vitamine B.

Miss F. M. Burwash has been granted the degree of Master of Arts for her work on "The use of Phosphotungstic Acids in the Isolation of Vitamine B."

Miss E. G. Gavin has studied methods of preparing phosphotungstic acids for using as precipitating agents.

Miss J. R. Panton has been studying the increase of metabolism due to the taking of a standard breakfast.

Mineralogy, under Direction of Professor T. L. Walker

During the summer of 1924 field work was carried on in North Hastings in connection with a study of the nepheline syenite occurrences of that region, in the Sudbury district, assisted by Mr. H. C. Rickaby, where observations were made on the contact metamorphism of the sediments overlying the nickel eruptive, and at Lake Clear in Renfrew County, where unusual opportunity is afforded for a critical study as to the conditions under which the deposits of apatite were formed. In June, 1925, field work in the vicinity of Port Coldwell was begun with a view to a mineralogical study of the nepheline rocks of that region.

In the laboratories during the term the following investigations were in progress:

1. Mr. D. E. Kerr-Lawson carried on experiments with a view to the separation of zirconium from hafnium and a general study of the distribution of hafnium in zirconium-bearing Canadian minerals.
2. Professor Ellis Thomson has continued his studies of the opaque minerals from the Cobalt silver region and from the Michigan copper region.
3. Professor A. L. Parsons and the writer jointly conducted the following:

   (*a*) An examination of certain types of calcite which appeared to have been formed from igneous fusion. As a result it has been established that some of the types are igneous in origin and were formed at a temperature not below 970°.

   (*b*) An examination of a variety of sodalite from Bancroft, Ontario, which, when freshly broken, is a fine pink in colour but bleaches in a few seconds in direct sunlight.

   (*c*) Experiments were begun with a view to establishing the relative ease with which certain ore minerals—arsenides, sulphides, and sulphosalts—are acted upon by meteoric waters. It is proposed to continue this series of experiments and to establish for a definite set of conditions the relative weathering coefficients for most of the common ore minerals.

Some of the results of the above work are contained in the Contributions to Canadian Mineralogy, 1925. In October, Mr. E. W. Todd, who for several years had been Research Assistant, resigned to accept an appointment with the Department of Mines of the Province. His work as Research Assistant was continued by Mr. H. C. Rickaby. To these gentlemen much of the success of our research work in recent years is due.

Physics, under Direction of Professor J. C. McLennan

During the Session 1924-25 there were thirty-nine graduate students in attendance. Of these eight were enrolled for the degree of M.A., and fifteen for the degree of Ph.D. During the Session one student obtained the Doctorate

in the Department of Physics and six the Master's degree. Two graduate students in Medicine received the Diploma in Radiology.

All the members of the Professoriate gave advanced courses of instruction in Theoretical Physics to graduate students, and all have either directed research workers or carried out investigations themselves. While the different researches were representative of various branches of Physics as in the past, on account of our special equipment, spectroscopic and low temperature investigations were particularly emphasized. With liquid air, liquid hydrogen and liquid helium available a beginning has been made on the utilization of these low temperature agents for the investigation of various problems, and it is expected that this field of research will be more intensely developed in the near future. While all the researches attempted have led to valuable results particular attention may be drawn to the discovery of the origin of the auroral spectrum which has long been an enigma. The list immediately following gives a summary of the various researches carried out and a second list appended gives the different papers published during the Session by the staff:

I. *Researches directed by Professor McLennan*

On the Origin of the Spectrum of Auroral Light.
By Professor McLennan and Dr. G. M. Shrum.

In this research it was found that the auroral green line never hitherto observed in laboratory experiments on spectra originates in a mixture of oxygen and helium with the latter greatly in excess. From this research we now know that at a distance of 100 kilometres up in the atmosphere, the latter consists largely of helium with small percentages of oxygen and nitrogen.

On the Luminescence Spectrum of Nitrogen and Argon at low Temperatures.
By Professor J. C. McLennan and Mr. H. C. Bates.

In this research, which is a continuation of one inaugurated last year, the spectrum of the vapours of nitrogen and argon at low temperatures and the phosphorescence of solid nitrogen and solid argon are being investigated.

On the Structure of the mercury green line and of the lines of the Balmer series of Hydrogen.
By Professor J. C. McLennan and Mr. H. J. C. Ireton.

In this research the powerful echelon spectrograph recently donated to the Laboratory by Mr. Sigmund Samuel is being used, and important results have been already obtained.

On the Under-water spark spectra of various metals.
By Miss M. C. W. Buffam and Mr. H. J. C. Ireton.

The spectra of various metals have been obtained and the results have led to the identification of a number of arc lines in the spectra of the metals examined.

On the Infra-red spectra of various elements.
By Professor J. C. McLennan, Mr. H. Grayson Smith and Mr. C. S. Peters.

In this research additions have been made to our knowledge of the spectra of carbon monoxide, gold, mercury and a number of other elements.

On the magnetic susceptibility of Krypton and Xenon.
By Miss Louise Crow.

By making measurements on the magnetic susceptibilities of Caesium Iodide and Rubidium Bromide an estimate has been obtained of the magnetic susceptibilities of Xenon and Krypton respectively.

On the series spectrum of Gold.
By Professor J. C. McLennan and Mr. A. B. McLay.
Through a study of the absorption spectrum of Gold vapour important additions have been made to our knowledge of the structure of gold atoms and of the series spectrum of this element.

On the absorption spectrum of metallic vapours.
By Professor J. C. McLennan and Mr. A. B. McLay.
For this research a special type of electric furnace was developed that enables one to obtain the absorption spectra in the extreme ultraviolet region with great ease. Important results have been obtained already with a number of metals.

On the spark spectrum of Thallium.
By Mr. W. C. McQuarrie.
By using the electrodeless discharge in Thallium vapour it has been found to be possible to arrange the wave-lengths of the radiation emitted by this vapour into a number of classes determined by the strength of the electric excitation.

On the crystal structure of Ammonia and Chlorine.
By Dr. K. Horovitz, of Vienna.
Dr. Horovitz has been given a Fellowship by the Rockefeller Foundation to enable him to come to Toronto in order that he might use the Cryogenic equipment recently installed for the prosecution of his research. The research is in its initial stage.

On the crystal structure of Carbon Dioxide and Nitrous Oxide.
By Professor McLennan and Mr. J. O. Wilhelm.
In this investigation the structure of the crystals of these two gases when solidified by liquid air has been shown to exhibit the characteristics of the simple cubic system.

On the electrical conductivity of the alkali elements and their alloys.
By Professor McLennan and Mr. C. D. Niven.
So far the electrical conductivities of sodium and potassium and an alloy of these elements have been studied down to the temperature of liquid hydrogen.

II. *Researches by Professor E. F. Burton and under his direction.*

On the Motion of Colloidal Particles in Alternating Fields.
By Professor E. F. Burton.
Measurements have been made in the spark discharge between metal plate electrodes at various temperatures.

On the Motion of Colloidal Particles in Alternating Fields.
By Professor E. F. Burton and Miss B. M. Reid.
The ordinary mobility experiments on colloidal particles were carried out with a slowly alternating current and indications given of gravitational settling of colloidal particles.

By Dr. John Satterly.
The Velocity of Sound in a liquid and its latent heat of Vaporization.
Equations by Bogdan and by Lewis connecting these two quantities were tested experimentally by Jonescu. The agreement was very rough. This is shown to be what one would expect and that such approximate formulae are of no real help to science.

On the Relation between the Latent Heat of Vaporization and the Curvature of the surface of the liquid.

Houllevigue, by an isothermal cycle, obtained an equation connecting these two quantities. A much simpler method of getting the same result has been found.

By Professor H. A. McTaggart.

On the correction of spherical aberration.

This deals with a particular stage in the computation of achromatic doublet objectives, viz., the estimation of the co-flexure necessary in the flint component to remove spherical aberration for a rim ray of a chosen colour.

By Dr. A. G. Shenstone.

Arc Spectra of Silver and Copper.

Confirmation of the terms $3p_1$ and $3p_2$ of the silver spectrum. Calculation from experimental data of seven new terms and several unidentified terms on the copper spectrum.

Physiology, under Direction of Professor J. J. R. Macleod

All members of the staff in Physiology have been engaged in some research problem pertaining usually to the Physiological Action of Insulin and other problems of Carbohydrate Metabolism. It has been possible, after several failures, to keep depancreatized animals alive in perfect nutritive condition for periods extending up to 18 months, and there is some evidence that during this time new pancreatic tissue becomes developed in the walls of the duodenum near the pancreatic duct. The importance of this information with regard to prognosis in diabetes cannot as yet be definitely stated. Using depancreatized animals that have been kept alive by means of insulin, it has been possible to study problems in metabolism, such as the origin of the ketone bodies and the incidence of coma, the possible derivation of sugar from fat, etc., much more thoroughly than was previously the case when, without injecting insulin, the animals lived only from 2 to 3 weeks. As a part of this investigation, through the aid of the Carnegie Corporation, an elaborate respiratory cabinet has been constructed by means of which the energy exchange of diabetic animals is being investigated. It is recognized that it is only by studies of this type that it will be possible to determine the sources of sugar in the diabetic animals, as well as the fundamental cause of diabetes; for although the discovery of insulin has demonstrated the presence of a substance in the body which inhibits the development of this disease, we are still ignorant as to its fundamental cause. Those who have been associated with me in this particular part of the work were: Dr. J. Markowitz, Mr. I. L. Chaikoff, Mr. W. W. Simpson and Dr. D. J. Bowie.

Professor Olmsted, with Mr. A. C. Taylor and Mr. W. R. Franks, have been engaged in an investigation of the cause for the increased consumption of oxygen in animals treated with insulin and Mr. Franks in various problems bearing on the relationship of calcium and other ions on the heart beat. Dr. Olmsted has also continued his investigations on the functions of the cerebrum.

Dr. N. B. Taylor has been investigating the action of the hormone which has been extracted from the parathyroid gland by Dr. James B. Collip of the University of Alberta. Besides corroborating Dr. Collip's findings it has been possible to demonstrate various interesting details with regard to the action of this hormone on calcium metabolism and on energy expenditure. The influence of various diets on its action has also been studied.

In collaboration with Mr. Orr and his assistants in the laboratory of the Insulin Committee considerable progress has been made with regard to the pharmacological assay of insulin, and various other problems of a related nature are under investigation. One outcome of this work has been to show that in

the so-called standardized white rat the action of insulin is very much more constant than in any other known animal, and also that the content of glycogen in the liver and muscles can be controlled within much narrower limits than has previously been possible in other animals.

During the past few weeks Dr. W. J. Macdonald of St. Catharines has brought to the laboratory for the investigation of its physiological action, an extract prepared by him from the liver. This extract has been found to have a definite effect in lowering the blood pressure in patients with high blood pressure. The physiological investigations have so far shown that the extract contains a hitherto unknown principle, having a slow and prolonged effect on blood pressure and unlike that of any other known depressor substance. Dr. Macdonald proposes to continue this work in the physiological laboratory during the summer months, and every facility, both with regard to assistants and equipment, has been placed at his disposal.

Political Economy, under Direction of Professor R. M. MacIver

The following graduate students submitted the theses mentioned:

Miss H. E. Fisher, Ph.D.—Professional Associations in Canada.

Miss M. Home, M.A.—History of Life Assurance in Canada in Its Social Aspects.

Miss A. H. G. Macdonald, M.A.—Clergy Reserves.

R. G. Carruthers, M.A.—Social and Economic Aspects of Family Life in a Selected District of Ontario.

C. W. Lightbody, M.A.—Party System in the Modern States.

In addition to the above studies graduating students of the Commerce Course and Political Science Course, under the direction of Dr. Innis, made a special study of the fur trade and submitted theses on various aspects of it. Some of the subjects treated in these theses are:

The Personnel of the Fur Trade.
Fur Trade Farming.
Government Regulation of the Fur Trade.
The Production of Furs.
Index to Prices of Furs.
The Manufacture of Furs and Related Industries.
The Fur Trade of Other Countries.
The Sales Organization of the Fur Trade.

These studies have been made available to those engaged in the trade and have aroused considerable interest.

It is the aim of the Department to encourage future investigations of a similar character in other Canadian industries.

Psychology, under Direction of Professor G. S. Brett

Four investigations have been conducted in the laboratory during the past year under Professor Bott:

Patterns of antagonistic muscle action—with the assistance of Miss D. Hearn. This is a continuation and extension of the work previously published upon the analysis of voluntary muscle action.

A law of orientation for stereoscopic pictures—with the assistance of S. N. F. Chant, G. G. Brown and Miss D. Hearn. This study has demonstrated (1) that stereoscopic photographs do not require to be shown each to a particular eye in order that perfect depth may be perceived; (2) that the appearance of depth depends on the orientation given the pictures when they are presented to the

observer. From experimental data a general formula has been deduced by which the orientation required for any pair of stereoscopic pictures may be computed. These results are ready for publication.

Tolerance of the eyes in fusing asymmetrical fields—with the assistance of J. M. Harvey (4th year). The limits of angular inclination at which two straight lines can be shown, one to either eye, and yet be stereoscopically fused as a single straight line have been determined under a variety of control conditions.

The relation of pupillary aperture to binocular rivalry—C. N. Clark. The conditions underlying the visual phenomenon of rivalry are obscure. This investigation should show whether involuntary changes in the size of the respective pupils are a factor. A special photographic method is being employed.

Certain members of the staff in psychology are also engaged upon researches relating to the mental health of children in public school attendance. A five-year programme of study in this field has been arranged by the Canadian National Committee for Mental Hygiene assisted by a grant from the Rockefeller Foundation. This work is under the direction of a Research Committee composed of representatives from the University, the Board of Education and the Mental Hygiene Committee. Initial investigations have been undertaken in a selected school this year with the co-operation of the school staff:

Cases studies upon types of "difficult" children—Dr. W. E. Blatz.
Problems in the grading of P.S. children—Professor E. D. MacPhee.

Intensive social study of dependency in a family group of four generations—Dr. W. E. Blatz.

June 30, 1925.

The School of Engineering Research has had a year of very satisfactory progress. A number of researches dealing with various engineering subjects, as well as with fundamental principles, were completed and published in engineering and other scientific journals. Bulletin No. 5 of the School also appeared, containing 11 papers from 4 departments of this Faculty. The following brief outlines of researches, either completed during the past year or in progress, show the great diversity of problems now being studied in the School.

C. H. MITCHELL,
Chairman, Committee of Management,
School of Engineering Research.

Department of Civil Engineering

Under the direction of Professor Gillespie:

Mr. F. E. Wilson has made a theoretical and experimental investigation of the mechanics of reinforced concrete poles such as used for overhead electrical distribution systems. He has compiled data and prepared charts and diagrams for strength, deflection, etc., in a form that will be usable by the busy engineer for whom, once available, it will represent a saving of both time and effort.

Under the direction of Professor Young:

The results obtained from a series of tests on the tensile strength of drilled plates have been thoroughly studied and a modification of earlier deduction rules worked out and incorporated in diagrams. The paper for the bulletin based on these results is already in type.

Preliminary work on steel transmission line towers, begun by Mr. C. E. Lewis, Research Assistant, last year, has been extended by Mr. W. B. Dunbar and Mr. H. J. A. Chambers, acting as research assistants. Mr. Dunbar has checked the results obtained by Mr. Lewis and a paper dealing with the economic proportions of transmission line towers will be prepared shortly. Mr. Chambers

has constructed an exact model of a high tension transmission line tower to one-tenth scale, and by means of a special gauge invented for the purpose, has determined the stresses in a number of members which have been previously in doubt. In addition, a series of single angle struts, some of them without intermediate lateral support and others with intermediate lateral support, are now being fabricated and will shortly be tested to destruction with the object of ascertaining the strength of this type of member in an actual tower.

Under the direction of Professor Stewart:

The adjustment and computation of the Gull Lake Triangulation:—

The work involved in this research may be naturally subdivided into: the field operations and the resulting computations. The former consisted of the reconnaissance, the establishment of the stations, and the observation of the angles; the latter comprised the adjustment of the angles by the method of least squares, so as to remove all inconsistencies, the solution of the triangles, and the final computation of the geodetic latitudes and longitudes of the stations and the azimuths of the lines joining them.

Under the direction of Professor Loudon:

A preliminary article on the question of Net Section of Riveted Tension Members was published in the *Canadian Engineer* in August, 1924. This article was also published by *Contracting and Engineering* in the United States. The results published showed that the theory upon which certain formulae for net section have been based is not correct. At the present time the investigation is being carried on to determine the correct distribution of stress in riveted tension members.

Department of Mining Engineering

Professor J. T. King, assisted by C. W. Coo:

(*a*) A comparative study of losses with bone ash, magnesite, and other commercial cupels.

(*b*) In bone ash cupels, the effect of grain size, proportion of grain sizes, pressure, moisture and shape of cups.

This is a continuation of the previous research on cupellation losses in assaying where the effects of air supply were investigated. Many cupel mediums are used in practice, though bone ash is the chief one. The purpose of these researches is to determine the effect of the many variables on loss, and, if possible, by the utilization of the information gained, evolve a standard cupel. The detection of these effects, some of them minute, has necessitated very careful work combined with a standardization of procedure and control not heretofore used. Satisfactory progress has been made and the work is well advanced.

By Professor H. E. T. Haultain and Professor F. C. Dyer:

A study of ball milling problems by means of high speed motion photography.

This is a continuation of previous work. Aided by the Provincial Motion Picture Bureau the following films have been completed:

(1) Showing the action of cubes in place of balls.

(2) Showing the action of lifters in the lining.

A great deal of preliminary work has been done preparing the way for films showing the paths of balls in conical mills. This is a much more difficult subject. The rehearsals are all completed, and it is expected to take the films within the next few days. Also within the next few days it is expected to complete a film showing the actions of rods in tube mills. Assistance for this work has been received from the Research Council at Ottawa.

Professor H. E. T. Haultain, aided by D. S. Halford, whose salary has been met by the Research Council at Ottawa, has continued his work on crushing problems. The underlying idea of this work has been an attempt to determine whether rock crushing problems can be studied satisfactorily on a laboratory scale and the results continue to show that this can be done. A comparison of the work done by a 12″ and a 24″ ball mill has been carried on.

Work with the miniature rolls and integrating dynamometer has been carried on along the following lines:

(1) A study of the energy required to crush the hard taconite ores of the Mesabi Range, and useful new light has been shed on the problem of their peculiar behaviour.

(2) A comparison of the results shown by these rolls with the results obtained in standard methods of testing road materials. These results seem to promise a simpler, quicker and surer method of determining the wearing qualities of rock used in road making.

(3) An attempt to determine the actual efficiency of the rock crushing process by means of comparing the heat generated with the energy used. This work shows that the actual efficiency of the best rock crushing machinery is extremely low, less than 5%.

Professor H. E. T. Haultain and John Beattie, Nipissing Mining Company Research Fellow, have commenced a new research, Mechanical Conditions Affecting the Rate of Solution of Gold and Silver in Cyanide Solutions. This has been an attempt to establish certain fundamentals affecting solution in cyanide mills. The work has developed an unexpected feature, namely, that the presence of slimes, that is very finely divided ore, has a very great effect in retarding the rate of solution of particles of metal.

Department of Mechanical Engineering

Under the direction of Professor Angus:

(1) Heat Transfer through Building Materials:

The work on this subject has been continued and several new walls have been tried, the results of these being available. In order that work along this line might be carried out more successfully, the experimental box has been entirely reconstructed and put in shape for carrying out experimental work along this line more readily than has been possible before. The box, which we originally placed a good many years ago, was in such bad condition through the amount of work which has been done in it, that this new construction became necessary, and some of our work which we have done in the new construction has proved quite successful.

Requests are coming in more or less frequently for information about all of the tests we have made to date, some of which were published in the No. 1 Bulletin, which is now out of print. It would be helpful if these results might be republished and made available again.

(2) Investigation of Water Turbines and Draft Tubes:

A very successful series of experiments was carried on along this line last summer, and the results were carefully worked up, and it was thought that they might be published, but on making careful analysis of the work, the results were found to be somewhat inconsistent, and the study has been continued during the winter as time permitted, to find out the cause of inconsistency, and to enable a more accurate set of tests to be made. These are now under way, and it is hoped to have the material ready for publication sometime during the coming winter.

(3) Considerable research work has been carried out by Professor Allcut on the Oil Engine which was installed in the laboratory a short time ago, and

this research has been completed, but I am sorry to say that I have not a copy of the results obtained, and Professor Allcut is in the Old Country during the summer. This material will be ready immediately on his return.

Under the direction of Professor Parkin:

During the past year an investigation of "Channel Interference in Wind Channel Testing" has been commenced. This is a subject of great importance in aeronautic work, inasmuch as all air-craft design is based on the results of tests on components and complete models in wind channels, and it is obviously very desirable to know to what extent the presence of the channel walls influences the results. The object of the research is to determine the magnitude of the wall effect and to permit greater accuracy in the design of aircraft.

Preliminary tests made with cylinders have yielded some very interesting and unexpected results. Cylinders of two diameters are being experimented with and later aerofoils of two sizes will be used.

Besides the information on "channel effect," much other useful information is expected to be secured, including resistance of cylinders (struts), aspect ratio factors and information on biplane and triplane combinations.

Department of Chemical Engineering

By J. W. Bain and G. M. Chute. The Behaviour of Cellulose on Heating:

This research, which was commenced by G. F. Kay under the direction of Professor Bain, has been continued and extended. It has been definitely established that when cellulose is heated to 200° C. one of the products is glucose, which has been identified in several ways, confirming its presence satisfactorily. No other sugar has been identified, and it is probable that fructose is the only other member of this group which may be present. The extent to which the cellulose is decomposed, the quantities of the decomposition products under vaying conditions, the variation in the nature of these products with the temperature, and other similar aspects of the problem have been investigated partly. The occurrence of formic acid has been definitely established. Other substances have been isolated, the precise nature of which is not yet known. A paper embodying these results was presented to the Royal Society of Canada at its May meeting this year.

By J. W. Bain and N. E. Russell:

The Behaviour of Wood on Distillation under Low Pressure:

This investigation originated in an observation made by G. F. Kay during the session 1924-25 regarding the appearance of a considerable quantity of flocculent white material during the distillation of wood at low pressure. The occurrence of this substance had never been noted before, and an attempt was made to isolate and identify it. It is actually produced only in small quantities, and a large number of distillations of beech and birch were carried out in order to yield sufficient amount of the substance to permit an investigation as to its character. The work is not quite complete, but it appears at present as though the substance is a mixture of a solid paraffin and of the so-called ligno-ceric acid. Beta-glucosan has been sought for in the products of distillation by several methods, but without success, and the amounts of formic and acetic acids formed have been carefully determined. Large quantities of heavy oils have been obtained, but these have not been investigated owing to lack of time. The course of the distillation at low pressures is markedly different from that which occurs at ordinary pressures in the wood distillation industry.

Under the direction of Professor Ardagh:

The work carried out on the "Distillation of Acetate of Lime," by A. D. Barbour, G. E. McClellan and E. W. McBride, was published in the November, 1924, issue of *Industrial and Engineering Chemistry.*

During the past academic year the writer planned to continue the work on the distillation of acetate of lime, using for the investigation the grey acetate of commerce.

Before satisfactory results could be obtained it was necessary to develop a dependable general method for the determination of the carbonyl group. This investigation was carried out by the writer and Mr. J. G. Williams, with the result that two papers have been prepared, both of which we expect to publish shortly. The titles of these papers are:

(1) An Investigation of Some Properties of Phenylhydrazine and Factors Affecting Hydrazone Formation.

(2) An Accurate General Iodometric Method for the Quantitative Determination of the Carbonyl Group in Organic Compounds.

Under the direction of Professor M. C. Boswell:

(1) With C. H. Bayley—On the Mechanism of the Action of Promoters in Catalysis.

This was published in the Journal of Physical Chemistry, Vol. 29, p. 11, (1925).

It has been shown that platinum black and many metallic oxides on reduction in hydrogen form relatively stable complexes holding surprisingly large amounts of hydrogen. This hydrogen is believed to exist in a surface film of charged hydrogen and hydroxyls on the surfaces of the particles. One reason for this belief is the great protection which it affords for the underlying interior content of oxygen. The action of catalytic poisons has been shown to consist in the discharge of this surface film so that the complex loses its capacity for holding hydrogen. The so-called "promoters" have been shown to function by increasing the capacity of the normal catalyst for holding hydrogen so that the surface film, which is the seat of the catalysis, is very considerably increased.

(2) The properties of the complexes formed by the reduction of platinum black and ferric oxide have been further studied. The results obtained have given further support to the theory of catalysis devised by us. This will be published shortly.

(3) A study of the electrolysis of certain colloidal solutions has been commenced.

(4) With R. R. McLaughlin—On the Mechanism of the Deacon Process.

A quantitative study of the reduction and oxidation of several compounds and complexes containing copper has enabled definite conclusions to be drawn regarding the nature of the reaction involved in the manufacture of chlorine by the Deacon Process. The commonly accepted explanation has been shown to be in error. This will be published shortly.

(5) A study of the complexes formed when anhydrous chlorides undergo partial reduction in hydrogen has been commenced. The reactions have been found to proceed in a manner wholly analogous to those occurring upon the reduction of oxides. Relatively large amounts of hydrogen remain on the reduction complex. It is proposed to investigate the catalytic properties of these complexes in hydrogenation and chlorination reactions.

(6) With B. Shaffer.

A Study of the Mechanism of the Vulcanization of Rubbers and of the

Action of Accelerators in Vulcanization has been undertaken. Some progress has been made in the direction of isolating specific sulphur compounds of rubber by using an accelerator of very much simpler constitution than those commonly employed.

(7) With V. B. Lillie.

A study of the action of hydrogen on iron sulphide and platinum sulphide was carried out. Complexes were formed containing a relatively large amount of hydrogen. These were found to possess catalytic properties for hydrogenation of ethylene. This work will be continued.

(8) With C. W. Small.

The action of hydrogen on the nitrides of boron, magnesium and calcium has been studied. Boron nitride was found to be extremely stable and to resist the action of hydrogen even at a very high temperature. As aluminium oxide which is very stable towards hydrogen has a very striking capacity for adsorbing water it was suspected that boron nitride might adsorb ammonia. It was found to do so to a striking degree. The adsorption curve was determined for 25° C. The work is still in progress.

(9) With P. L. McVicker.

A quantitative study of the action of alkalies and acids on some carboxylic and sulphonic acids was carried out with a view to arriving at some information regarding the mechanism of these actions. Facts confirmatory of the work of Dickson in this laboratory were obtained. This study is being pursued in another direction.

(10) With D. D. Mossman.

Some progress has been made toward the determination of the nature of the reaction involved in the oxidation of dimethyl aniline in the presence of aluminium chloride.

Department of Electrical Engineering

Under the direction of Professor H. W. Price:

Properties of Synchronous Motors:

Synchronous motors are coming into much more general service for direct-connection to slow-speed compressors. The large variation in driving torque within each revolution causes a continuously variable electrical input to the motor, the extent of the variation being limited by an expensive flywheel. The calculation of the minimum flywheel effect and expense necessary is based on certain electrical assumptions often found not correct.

An electrical-optical mechanism has been developed which enables one to study the exact value and form of the mechanical oscillations within each revolution, and the angular lag of a synchronous motor due to load. We hope more accurate knowledge of the flywheel situation will result.

Electrically Operated Astronomical Clock:

The theoretical work in exploration of the properties necessary for maximum constancy of rate is completed. Based on it a new form of pendulum has been devised. This, combined with our method of driving it and yet leaving it almost entirely free, will, we hope, result in greater constancy of rate than has been attained before. A long series of time observations in continuous operation will be necessary before results can be reported.

Department of Metallurgical Engineering

Under the direction of Professor O. W. Ellis:

(1) Influence of Constitutional Changes on the Plastic Deformation of Steels.

This research is still being carried forward, and it is hoped that before the end of the summer the results will be in a condition for publication in a volume of the Carnegie Scholarship Memoirs of the Iron and Steel Institute.

(2) Influence of Temperature of Pouring and Rate of Cooling on the Properties of Lead-base bearing metals.

This research, the results of which were to have been forwarded to the American Institute of Mining and Metallurgical Engineers last year, was held up on account of a certain somewhat remarkable phenomenon which we observed when repeating one or two of the final experiments. A report on the research has been written and is, at the present time, under consideration by the Publication Committee of the Institute of Metals. It is hoped that the paper will be presented at the September meeting of the above Society.

(3) Heat Treatment of Brass.

This work has been carried forward and the limits of the Alpha-solid solution of the zinc-copper alloys have been determined for two or three relatively low temperatures. The publication of a paper by Messrs. Genders and Bailey on the subject of the limits of Alpha solid solution made it unnecessary to go very much further with the work which we had undertaken, and the results of our research have been published as a contribution to the discussion of the paper by Messrs. Genders and Bailey. Not all the work that was carried out in this connection has, however, been dealt with in this contribution, and it is hoped during the summer to gather together all the various results of the experiments carried out and to present the same for the consideration of the Publication Committee of the American Institute of Mining and Metallurgical Engineers at an early date.

(4) Investigation into certain Chromium molybdenum steels.

This work is still in progress.

Department of Architecture

Under the direction of Professor Madill:

With F. B. Brown.

Following a year spent abroad Mr. Brown has been studying the work of the French Renaissance. A design has been worked out for an official residence for the Governor-General of Canada to be located on the Rideau Hall site at Ottawa, in which the French Renaissance has been adapted to Canadian conditions and practical requirements.

Report of the Committee of Experimental Research in Medicine—Dr. D. E. Robertson, Secretary

The Committee of Experimental Research in Medicine have this year provided facilities to a considerable group of Physicians and Surgeons in the University. It is therefore fulfilling the purpose for which it was intended, that of providing facilities to practising medical men in the University who had some clinical problems that could be worked out in the laboratory.

The Committee have maintained an operating suite, with an attendant; and animal room, with an attendant, and on part time, an illustrator.

The work done has been very considerable. Experiments, all made under anaesthesia, having during the year reached the number of 517. These covered a large medical and surgical field. In this number are a series of experiments that were begun last year, and again some that are now in progress, which will be continued into next year.

The following is a list of the experiments, with the worker conducting them:

Dr. Jas. W. Ross—"The Value of Intravenous Administration of Hypertonic Sodium Chloride in Paralytic Ileus."

Dr. J. Grant Strachan—"The Investigation of Cartilage Transplants in Dogs."

Dr. J. L. Macdonald—"A Calorimetric Test to determine the actual exchange of blood which takes place in an Exsanguination Transfusion."

Dr. W. E. Gallie and Dr. J. L. Macdonald—"An attempt to produce Legge's Disease in the Hips of Puppies."

Dr. E. Earl Shouldice and Dr. B. Eagles—"An Attempt to isolate the Toxine of Intestinal Obstruction."

Dr. F. F. Tisdall—"An Attempt to find Essential Factors which cause a Disturbance of the Carbohydrate Metabolism in Infants."

Dr. Wm. A. Costain—"The Lymphatic System in Infection and Cancer."

Dr. R. I. Harris—"The Excretion of Bacteria in the Urine."

Dr. Kenneth Mackenzie—"Experiments on the Central Nervous System."

Professors W. H. Hendry and Harding—"Experiments on Toxaemia of Pregnancy."

Zymology, under Direction of Professor H. B. Speakman

During the past year the laboratories of the Department have been fully occupied, and the following are the problems which have been investigated:

H. B. Speakman—"The Carbohydrate Metabolism of Bacillus acetoethylocum."

H. B. Speakman and D. McKay—"The physiology of bacterial deamination."

A. M. Wynne—"The influence of the reaction of the medium on the butyl alcohol-acetone fermentation."

A. H. Gee and R. O. Stalter—"The effects of neutral salts on the yeast fermentation."

R. Manuel and G. Beatty—"The carbohydrate and protein metabolism of Aspergillus oryzse."

Department of Dental Research—C. J. Fraser, M.A.

The work done in the Department of Dental Research from July, 1924, to June, 1925, includes:

1. Routine cultures from apical infections and Dental pulps.

2. A continuance of research on a classification of Streptococcus viridans from dental infections by agglutination and precipitation methods.

3. The determination of the efficiency of some of the ordinary germicides when used in the pulp chamber, and their ability to pass through to the apex.

4. The publication in the *Dominion Dental Journal* (Jan.) of the work done previously on the efficiency and germicidal power of some dental fillings.

5. Letters were sent in reply to questions on the effect of diet on the teeth and some menus were planned by request.

(9) PUBLICATIONS

FACULTY OF ARTS

DEPARTMENT OF ARCHAEOLOGY

Harcum, Miss C. G.—Reviews of *Orientalische Kostume in Schnitt und Farbe*, by Max Tilke, Berlin: Ernst Wasmuth, 1923. (Journal of Oriental Research, October, 1924.)

And *Studien zu der Entwicklungsgeschichte des Orientalischen Kostums*, by Max Tilke, Berlin: Ernst Wasmuth, 1923. (Journal of the Society of Oriental Research, October, 1924.)

Two ladies of Tanagra. (Bulletin of the Royal Ontario Museum of Archaeology, May, 1925.)

A Greek Lamp of Chinese Form. (Bulletin of the Royal Ontario Museum of Archaeology, May, 1925.)

Department of Astronomy

Young, R. K.—*The Absolute Magnitude and Parallaxes of 1105 Stars.* (Publication of the Dominion Astrophysical Observatory, Vol. III, No. 1.)

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Note on the Spectroscopic Orbit of 12 Lacertae. (Journal R.A.S.C., April, 1925.)

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Dymond, J. R.—*Food Studies of Lake Nipigon Fishes.* In collaboration with W. A. Clemens and N. K. Bigelow. (University of Toronto Studies, Publication of the Ontario Fisheries Research Laboratory, No. 25.)

Huntsman, A. G.—*Oceanography.* (Handbook Brit. Ass'n Adv. Science, Toronto, 1924.)

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Limiting Factors for Marine Animals. 2. Resistance of Larval Lobsters to Extremes of Temperature. (Contr. Canad. Biol. N.S. Vol. II, Toronto, 1924.)

Circulation and Pollution of Water in and near Halifax Harbour. (Contr. Canad. Biol. N.S. Vol. II, Toronto, 1924.)

The Ocean around Newfoundland. (Canadian Fisherman, January, 1925, Gardenvale, Que., 1925.)

Huntsman, A. G. and Sparks, M. I.—*Limiting Factors for Marine Animals. 3. Relative Resistance to High Temperatures.* (Contr. Canad. Biol. N.S. Vol. II, Toronto, 1924.)

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Walker, E. M.—*The Odonata of the Thunder Bay District.* (Canadian Entomologist, Vol. 56, July and August, 1925, pp. 170-176, 182-187.)

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Department of Chemistry

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Some derivatives of Acenaphthene. In collaboration with Lorriman, F. (Trans. Roy. Soc. Can. p. 119, 1924; Jour. Am. Chem. Soc. *47*, 211, 1925.)

The Reaction of aromatic monobasic anhydrides with benzene and aluminium chloride. In collaboration with Cryer, J. (Trans. Roy. Soc. Can. p. 120, 1924.)

The Reaction of Quinolinic anhydride on aromatic hydrocarbons and aluminium chloride. In collaboration with Jephcott, C. M. (Trans. Roy. Soc. Can. p. 120, 1924.)

Burt-Gerrans, J. T.—*Comparison of Storage-battery Separators made from different kinds of wood.* In collaboration with Woodburn, C. (Trans. Roy. Soc. Can. p. 123, 1924.)

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Heats of Formation of Phenol-Water solutions at 75° C. In collaboration with Hope, W. B. (Trans. Roy. Soc. Can. p. 121, 1924.)

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(10) REPORT OF THE LIBRARIAN

(W. S. Wallace, Esq., M.A.)

I beg to submit the following report on the work of the University Library for the year ending June 30, 1925.

The number of volumes added to the Library during the year has been 7,000, and the number of pamphlets 3,717. The total number of bound volumes in the Library is now 203,777, and the total number of pamphlets 69,218.

The statistics of the use of the Library by undergraduates, in comparison with the three previous years, are as follows:

	1921-22	1922-23	1923-24	1924-25
Day books	41,928	51,513	80,172	88,068
Night books	18,998	20,508	31,314	34,549
Week books	4,792	5,715	12,316	11,727
Totals	65,718	77,736	123,802	134,344

These figures show an increase of over one hundred per cent. in the use of the University Library by undergraduates in the last three years.

There has been an increase also in the number of graduates using the Library. Whereas there were 497 names in the graduates' register in 1922-23, and 607 in 1923-24, there have been during the past year 669 graduates in the register.

An outstanding feature of the past year has been the early exhaustion of the funds for the purchase of books and periodicals. In 1924, the Librarian had to request most departments to withhold further recommendations at the end of February; but in 1925, the funds for the purchase of books in practically all subjects were overspent or exhausted by the beginning of January. It has been possible, by careful economy, since that date to meet the most urgent demands from funds allocated to office and other expenses; but there has accumulated in the meantime a vast number of arrears in orders for books, some of which will, no doubt, be now out of print and difficult to obtain. It is clear that the book funds of the Library are far from adequate for meeting the requirements of the academic departments of the University; and for this reason I have asked for a large increase in the appropriation for the purchase of books during the coming year.

I have the greatest satisfaction in reporting that the University of Toronto Library has recently been fortunate in securing, through the kindness of Dr. Herbert Putnam, the Librarian of Congress, and Dr. H. H. B. Meyer, the President of the American Library Association, a depository set of the Library of Congress catalogue cards. These cards, which now number about one million, are a bibliographical tool of the utmost value, and will be of great assistance, not only to members of the Library staff, but also to the general public.

I should be remiss in my duty if I did not bring to your attention the services of the assistants in the University Library during the past year. They have faced, with unfailing cheerfulness, a hitherto unprecedented strain of work, which has often meant working overtime without any additional remuneration; and I wish to record here again my sense of gratitude for their support, and my hope that means may be found to reward more suitably their efforts.

All of which is respectfully submitted.

(11) REPORT OF THE DIRECTOR OF THE DEPARTMENT OF SOCIAL SERVICE

(Professor J. A. Dale, M.A.)

The past session has been marked by advances made possible by the lengthening of the diploma course to two years. Not only has the number of

graduates nearly doubled, but the course has been strengthened in various ways, and plans for further development brought within measurable distance. It will be possible to report on these next year; meantime it is satisfactory to note that we are assured a strong graduating class for 1926. The Department had the salutary experience of being surveyed. Although the inquiry covered only the training of workers for the agencies devoted to the care of children, it afforded a test of the general methods of education, and especially of the interweaving of theory and practice. The investigators, from the American Association of Child Welfare, were making a survey for the Federation of Community Service and gave us not only a favourable report but the help of their advice.

It is a very great pleasure to record the gift to the Department of the first two scholarships, each of them of special interest. One is the gift of the Alumni of the Department, and is intended to help in the recruiting of the best possible students to enter the course, a matter which the alumni rightly consider to be of the utmost importance to their profession. The other has been endowed by the Federation of Jewish Philanthropies in honour of the ministry of Rabbi Brickner —a tribute as rare as it is fitting to one whose devotion to high ideals of social work is a vital expression of his religion.

The survey mentioned above brought confirmation of our knowledge of the good work being done by old students in the city; and good reports frequently come in from other places of work done, sometimes in established agencies, sometimes in breaking new ground. Our alumni are holding important positions not only here but in Ottawa and Hamilton, Montreal and Victoria; and one is in charge of the Child Welfare work of the Union of South Africa.

No report would be complete which did not gratefully record the hearty co-operation of the social agencies of the city in the provision of facilities for field work, and the devoted care which is freely given by the supervisors.

(12) REPORT OF THE DEPARTMENT OF PUBLIC HEALTH NURSING

(Miss E. K. Russell, B.A., Director)

In presenting a report for the year 1924-1925 I would call attention to the following figures:

The number of students registered for the 9 months' Diploma Course	33
The number of students registered each for one month of special work arranged for hospital undergraduates (a class of 22 each month over a period of 7 months)	154
The number of students registered for the two weeks Refresher Course offered to practising public health nurses	60

The numbers given above represent the heaviest work of this Department during the past year, and at the same time indicate the three groups that are seeking help from us. We have discovered that our work cannot stop with the satisfying of the demands of our diploma students. In addition there are these two other groups who are knocking insistently at our doors and their importunity will not be denied: the two groups are (1) the practising public health nurses who seek further teaching but cannot leave their posts for any great length of time, and (2) the hospital probationers who are receiving their fundamental training in nursing, and who must now understand the role that preventive medicine is playing in our community life. It appears that this Department cannot shirk responsibility. We must be prepared to do more in the way of Refresher Courses, and also to help the hospital nursing schools with their problems.

In connection with our diploma course the most important development of the past year has been the working out of co-operation with the Toronto Board of Education for the purpose of giving our students certain practice teaching in the class-rooms of the public schools.

A further special piece of work is the preparation of foreign students sent to Toronto from Europe. Each individual requires a special programme, and with the help of the public health organizations of Toronto we are trying to meet their needs. So far we have had but moderate success.

Again this year this Department has had a number of scholarships offered for its students. These are from the Alumnae Associations of the Nursing Schools of the Toronto General Hospital, the Toronto Western Hospital, the Women's College Hospital and St. Michael's Hospital, Toronto, and from the Ontario Red Cross Society, the Victorian Order of Nurses, the Toronto General Hospital and the Rockefeller Foundation.

(13) REPORT OF THE DIRECTOR OF UNIVERSITY EXTENSION AND PUBLICITY

(W. J. Dunlop, Esq., B.A.)

The Teachers' Course is each year gaining ground. In June 1925 sixteen who had been taking this course graduated with the degree of B.A., which makes a total of seventy-six graduates in the past five years. During the year now closing there have been 353 teachers (167 men and 186 women) enrolled in the Second, Third and Fourth Years of the Course, of whom 140 took their work in the Summer Session and 213 studied in Teachers' Classes during the winter in Toronto, Hamilton, and St. Catharines. Our Summer Session will probably never be very large in comparison with Summer Sessions in the United States because of the great amount of winter work that this University is able to supply. The work in the Teachers' Classes during the winter session is most satisfactory, and the teachers greatly value the opportunity to secure their work in this way. The new arrangements which the University has made with the Department of Education so as to provide a means by which those who hold the Pass B.A. degree may proceed to an Inspector's Certificate or to a Specialist's Certificate have already done much and will do more to make our Teachers' Course popular with the teachers of Ontario. Very gratifying it is to see that a large proportion of those who graduate in the Teachers' Course take up the work leading to the degrees of Bachelor of Pedagogy and Doctor of Pedagogy. In addition to the 353 teachers already referred to, 302 teachers took correspondence courses during the winter in Arts subjects, in Upper School, Middle School, Commercial, and Forestry subjects. Of the 143 of these who studied Upper School or Honour Matriculation subjects, the majority intend to take the Teachers' Course as soon as they have completed the First Year requirements by taking a sufficient number of Honour Matriculation subjects. The total of 655 teachers who are taking work with this Department indicates rather clearly that the teachers of this Province realize the necessity for continuing to improve in academic and professional status.

Tutorial classes, both Urban and Rural, but particularly the former, were well attended during the year, the total enrolment being 321, of whom 94 were men and 227 women. There were four of these classes in English Literature, one in Journalism, one in Economics, and one in Italian for Vocalists.

There is always something new in Short Courses. This year a course of 52 lectures was given in subjects relating to Life Insurance, the course being spread over thirteen weeks. The enrolment was 187. A new course of two weeks' duration on the Business Cycle was given with an attendance of 47. The Summer Course in Dramatic Art was attended by 44 persons, the Nurses' Summer Course by 188, the course in January for Public Health Nurses, which was given in co-operation with the Department of Public Health Nursing, by 64. 147 pupil-nurses enrolled with this Department in order to take the training arranged for them by the Department of Public Health Nursing. This was a

new arrangement which has worked out so well that the hospitals have asked that it be continued and enlarged next year.

The only phase of Extension Work which was not quite as successful in point of numbers this year as it was last year, though more successful probably in the matter of instruction, was the Workers' Education Association in which 982 men and women were enrolled. The principal cause for the falling off in the attendance at these classes is to be found in the prevailing industrial depression. When men are out of employment they will not attend study classes. Another reason may possibly have been the fact that most of the Workers' Educational Association classes have been conducted on a one-year curriculum. The first of these causes will be removed only when commercial conditions improve. Steps have now been taken to remedy the second cause by a proposal, which has been accepted by the Executive Council of the Workers' Educational Association of Ontario, to establish Tutorial Classes on a continuous three-year prescription of work. There will, under this plan, be fewer W.E.A. Classes but a fairly large number of Tutorial Classes in Toronto and Hamilton. To the W.E.A. Classes only working men and women, in the strict sense of the term, will be admitted, but in the Tutorial Classes the distinction will not be made. During this year there were 463 persons enrolled in W.E.A. Classes in Toronto; 260 in Hamilton; 51 in Windsor; 51 in Ottawa; 36 in Galt; and 31 in Brantford; a total of 982.

1,031 men and 1,514 women were enrolled in the various Extension Classes, making a total of 2,545.

This year there was a large increase in the number of Extension Lectures delivered by members of the staff throughout the Province. The total was 244 as compared with 188 the year before. Of these 118 were given in Toronto and 126 elsewhere in the Province. The centres are Acton, Agincourt, Ayr, Brampton, Brantford, Bolton, Barrie, Bowmanville, Belleville, Cobourg, Chatham, Chapleau, Dunnville, Dundas, Erin, Freeman, Georgetown, Guelph, Galt, Hamilton, Harriston, Jarvis, Kitchener, Kincardine, London, Lindsay, Mimico, Marmora, North Bay, Nelson, Ottawa, Owen Sound, Port Colborne, Peterborough, Richmond Hill, St. Catharines, St. Thomas, Snelgrove, Stouffville, Sunbridge, Stayner, Welland, Woodstock, Weston. In some of these centres a series of from six to ten lectures was arranged, and most of the organizations asked for three or more lectures. It will be noted that lectures were given as far west as Chapleau and as far east as Ottawa. No record of the attendance at these lectures was kept this year though it is proposed to keep such a record, if possible, next year. The largest attendance reported was about 600 and the lowest about 30; a fair average would probably be 50, which would mean that nearly 13,000 people received some instruction from the University by this means.

Sets of lantern slides, with accompanying explanatory bulletins, were supplied to several organizations and 1,451 Star Maps were sold at one cent each to groups interested in studying stars, planets and constellations.

Publicity Work has proceeded on much the same lines as in former years. The exhibit at the British Empire Exhibition at Wembley has been continued as last year and is as popular as before. The same statement applies to the University's exhibit at the Canadian National Exhibition. The telescope service drew larger numbers than in any previous year. Eighteen thousand copies of "Commencement 1924" were published and distributed to all graduates. Five thousand copies of an interesting and well-illustrated bulletin on the architecture of the University Buildings, written by Professor C. H. C. Wright, were published and distributed; also three thousand copies of a Bulletin of The Royal Ontario Museum of Archaeology. For the Department of Political Economy a circular on the Fur Trade of Canada was published and a number of theses on this subject are available for loan for two-week periods to those in-

terested in this industry. So popular are these theses that all of them are continuously out on loan. Three thousand copies of a new Bulletin of Extension Lectures have been published, and this one contains a much larger list of available lectures than any of the previous bulletins. Quantities of all these bulletins were supplied to the Toronto Transportation Commission for use in their waiting rooms, and to the same Commission a statement was supplied for the use of the announcers on their sight-seeing buses when these are travelling through the University grounds.

Many other activities, not so easily defined, come naturally within the scope of Extension and Publicity; for example, a number of graduates have been placed in employment with commercial firms who have asked for University-trained men. Questions of various kinds about the University and its work have been answered by telephone and by letter. There is a very large correspondence from people in all walks of life who ask for advice and guidance in taking advantage of educational facilities. More and more this Department is being used by the public as an Information Bureau on educational problems and, no matter what the question, every effort is made to answer it courteously, promptly, and fully. Newspaper reporters call every day for University news for various kinds of periodicals requesting items and articles for publication.

(14) REPORT OF THE DEPARTMENT OF MILITARY STUDIES

(Colonel W. R. Lang)

As requested, I have the honour to report as follows on this Department for the Session 1924-25.

Enrolments

The number of Honours and Pass students enrolled in the six courses named below were:

	Arts	Meds	App. Sc.	Total
Course 1. (General) Juniors (II Year Arts).....	39	..	..	39
" 2. " Intermediates (III Year Arts).	26	..	..	26
" 3. " Seniors (IV Year Arts).....	22	1	..	23
" 4. " Special Class (II, III, IV Yrs.). (For students unable to attend courses 2 and 3.).....	18	16	15	49
" 5. (Engineers).....	1	..	14	15
" 6. (Army Medical).....	..	22	..	22
				174

In addition to the above total, 129 took drill, musketry, physical training and other practical instruction with the C.O.T.C.

Infantry Courses

2. Fifty-six students successfully passed the 1924 examinations conducted by the War Office for Imperial Certificates of Proficiency. In March of this year 59 students passed the practical examination and sat the written examination for W.O. Certificates "A" or "B" Infantry, of whom 43 were successful for Certificate "A" and 8 for Certificate "B". Six other candidates qualified for admission to a course of training with the Canadian Air Force.

Engineer Course

3. A course for Engineer qualification was included in the Department's work for the first time. The technical portion was conducted at the Head-

quarters and with the equipment of the 2nd Field Co., Canadian Engineers. Fifteen members who attended this course, all but two of whom already held Certificate "A" in Infantry, sat the War Office examination for Certificate "A" Engineers, and all were successful.

Army Medical Course

4. Early in October a course was commenced for 5th and 6th Year medical students desirous of qualifying for A.M.C. Certificates. This was conducted by the Department's staff, assisted by the Medical Officer of the C.O.T.C., and by the District Medical Officer. *Matériel* for technical instruction was loaned by District Headquarters. Owing to the special circumstances of this class and to its being held this year for the first time, the twelve of its members presenting themselves as candidates were examined under arrangements made by the Department of National Defence for certificates qualifying them as officers of the C.A.M.C. 11 passed. In future these candidates will take O.T.C. Certificate "A" prior to commencing, in their 6th Year, the course leading to the medical officers' certificates issued by the War Office.

5. The Department is in need of more lecture-room accommodation; also of a place in which drill and practical instruction can be carried out during the winter. This is necessary if the possibilities of the Department are to be fully exploited. The basement and corridors of two University buildings, in addition to 184 College Street, had to be made use of throughout the winter—a very inconvenient and unsatisfactory arrangement.

6. Brigadier-General G. S. Cartwright, C.B., C.M.G., Retired List, Royal Engineers, has again acted as Special Lecturer (without expense to University funds), and his services have been of great assistance to the Department.

(15) REPORT OF THE UNIVERSITY HEALTH SERVICE (MEN)

(*George D. Porter, M.B., Director*)

Examinations.—During the early part of the fall term all the first and second year students received their physical examinations. All students in other years also taking part in athletics received their physical examinations, as it is now required that their certificates should be signed by the medical examiner before being allowed to play on athletic teams. (Over 2000 athletic certificates have been signed during the year, but some of these have been counted twice as students frequently take up more than one game during the year.)

The results of our examinations show that while there are numerous physical defects among the students and a few serious disabilities, yet their general standard is excellent.

Those found physically fit and able to take physical training	93.8%
Those found with some defect or disability requiring corrective or modified physical training	4.7%
Those unfit for physical training at all	1.5%

Of these half were only temporarily unfit, the remaining half permanently.

Special Corrective and Supervised Classes.—There are 215 students enrolled in these classes. While there were only 4.7 per cent. of students placed here after the first examination in the fall, yet through illness and accident during the year this enrolment increased. This was also augmented by those classified as physically fit but who entered these classes for the correction of some defect, such as flat feet, slight curvature, round shoulders, etc.

Re-examinations are frequently made during the year and advice given in regard to athletics and physical training and health matters generally.

Dispensary Service.—During the year over nine hundred calls (906) were made at the Director's Office by students seeking advice, treatment for emergencies and re-examinations.

Education.—Personal advice covers a good deal of ground in this regard. Lectures on first aid have been given to the first year medical students at their own request, and lectures on resuscitation of the drowned to classes in swimming.

Sickness and Accidents during the Year.—Cases of illness occurring among the first and second year students during the year for which temporary exemptions were granted from physical training and C.O.T.C

Colds	203	Myalgia	3
Influenza	49	Hernia	1
Bronchitis	7	Cardiac trouble	5
Tonsilitis	9	Dental trouble	13
Pharyngitis	17	Frost bite	1
Laryngitis	1	Haemorrhoids	2
Otitis	4	Local Infections	8
Antrum trouble	2	Abscess	3
Pleurisy	1	Injuries	92
Pneumonia	2	Fractures	10
Scarlatina	2	Rib 3	
Chicken-pox	1	Arm 1	
Mumps	8	Collar bone 1	
Rheumatic fever	1	Finger 1	
Arthritis	2	Nose 3	
Appendicitis	4	Leg (fibula) 1	
Nephritis	1	Dislocation (shoulder)	1
Inflammation of eyes	5	Sprains	43
Epistaxis	3	Contusion	22
Furunculosis (Boils)	14	Abrasions	11
Ringworm	3	Cuts	3
Neuralgia	1	Burns	2
Gastralgia	15		

Operations 12

Appendicitis	2
Hernia	3
Nasal	5
Glands	1
Tonsils	1

Total 495

Improvement during the Year.—It is pleasing to note that while only 4.7 per cent. of the second year students have had their physical standard lowered through illness or accident during the year, there were 69 per cent. of those below A-1 who had their standard raised during the same time. Many of the A-1 men also improved in height and weight and in general fitness. Our intention is to report more fully upon statistics regarding physical findings when the number examined is sufficiently large.

REPORT OF MEDICAL ADVISER OF WOMEN

(Dr. Edith Gordon, Medical Adviser)

Physical Examinations

There have been 627 physical examinations made. Of these 333 were compulsory. These were of students from University College, the Faculty of Medicine, the Faculty of Applied Science, and the College of Education, who were required to take the physical training prescribed for the women students of these colleges and faculties.

The remaining 294 examinations represent voluntary examination on the part of the students. All faculties, colleges and departments of the University

were represented in this group. Among this number were 34 who have been examined each year for four successive years; 73 who have been examined each year for three successive years; and 101 who have been examined this year as well as last year. I have tabulated these examinations according to improvement or otherwise.

During the year 29 re-examinations were made. These have been made upon students who were taking the remedial classes in the gymnasium, and upon other students who were exempted from the physical training requirement because of physical disabilities.

There have been many examinations of students participating in athletic contests. These examinations are required of all students taking part in inter-faculty and intercollegiate competitions by the Women's Athletic Association.

CONSULTATIONS

There have been 1018 consultations. These are mostly with students seeking advice regarding their general health; what causes, and how they may rid themselves of annoying symptoms through proper diet, adequate exercise, good health habits, etc.

Certain emergency work, of necessity, is done in the medical office, but any case that needs more than the simplest care is referred elsewhere for treatment.

ILLNESS

There has been considerable illness of a mild character among the women students during the year. Colds and naso-pharyngitis of a persistent type have been present among the students throughout the winter. This has been particularly true of the students of the College of Education, where the infectious nature of the disease was amply demonstrated, and where the desire not to miss academic work more than overcame the fear of spreading the disease among class-mates. The lack of infirmary facilities for these students has been very much felt. Rooming and boarding houses are most unsuitable places in which to care for students who are suffering from communicable diseases. Until sufficient residential accommodation can be provided for the women students, some arrangement for infirmary care during short periods of illness should be provided for them.

LECTURES

A series of three Health talks was given to all the women of the first year in University College and the Faculty of Medicine. It was necessary to repeat each talk six times in order to reach all the students. It is hoped that this can be continued in the future, and that provision for it will be made in the University time-table. Miss Coventry very graciously gave the required time from the gymnasium periods, and granted Physical Training credit for attendance at these lectures.

A series of four lectures in Personal Hygiene was given to the class in Public Health Nursing.

A series of ten lectures on Personal Hygiene was given to the students in the first year of the course leading to a diploma in Physical Training, and fifteen lectures and demonstrations in First Aid were given to the second year class in the same course.

NEEDS

More than ever the crying need of the women of the University is for a larger and properly equipped Department of Physical Education. The present

quarters are far too small and cramped for the number of students who are required to take physical training work, and quite inadequate for the needs of the various groups who desire to participate in the different activities centred in the gymnasium.

A separate room for remedial classes has helped to solve in part the problem of caring for those who need special and individual exercises to correct postural or other defects. This room, however, is not suitable for the purpose it has to fulfil, and it is hoped it will be only a temporary expedient, and will be the forerunner of an excellently planned and equipped Corrective Department.

There is a great desire on the part of the Medical Office and of the Department of Physical Training for Women to be able to develop and expand further, but such seems impossible in the present quarters, and it is sincerely to be hoped that in the near future more adequate accommodation will be provided.

PHYSICAL EXAMINATIONS OF THE WOMEN OF THE UNIVERSITY OF TORONTO FOR THE YEAR 1924-1925

University College (1928)		185
University College (other years)		111
Faculty of Medicine (1930)		11
Faculty of Medicine (other years)		12
Faculty of Applied Science		1
Ontario College of Education		136
Victoria College		47
Trinity College		42
St. Michael's College		43
Department of Social Service		2
Department of Public Health Nursing		23
Faculty of Music		2
Royal College of Dental Surgeons		3
Graduate and Occasional		9
Total		627
Group A.—Compulsory Examinations		333
1. Students physically able to take Physical Training		88.6%
2. Students requiring supervised or corrective exercises		10.8%
3. Students unable to take Physical Training (temporarily or permanently)		.6%
Group B.—Voluntary Examinations.		
1. Students physically able to take Physical Training		82.3%
2. Students requiring supervised or corrective exercises		13.6%
3. Students unable to take Physical Training		4.1%
Examination for the Second Year in succession		101
Marked Improvement	11.88%	
Slight Improvement	50.49%	
No Improvement	26.74%	
Retrogression	26.74%	
Examination for the Third Year in succession		73
Marked Improvement	8.21%	
Slight Improvement	57.52%	
No Improvement	19. 2%	
Retrogression	15.07%	
Examination for the Fourth Year in succession		34
Marked Improvement	8.84%	
Slight Improvement	47.06%	
No Improvement	20. 6%	
Retrogression	23. 5%	
I.—Preventable and correctable defects (poor posture, poor nutrition, underweight, overweight, functional spinal curvature, etc, weak feet, constipation, etc.). These defects could be corrected by remedial exercises and proper personal hygiene.		75.54%
II.—Defects that could be corrected by treatment, operation, etc. (diseased tonsils, eye defects, diseased teeth, etc.)		17.37%

III.—Defects that are uncorrectable, but that could be prevented from becoming more marked, or developing into acute conditions (organic heart lesions, organic spinal curvature, chest conditions, etc.)	8.69%
Total Defects	1,255

CONSULTATIONS, 1924-1925

General Hygiene	191
Upper respiratory tract	281
Influenza	24
Tonsilitis	7
Gastro Intestinal tract	14
Appendicitis	1
Jaundice	1
Haemorrhoids	4
Intestinal parasites	1
Urinary disturbances	1
Varicose veins	1
Hernia	1
Sprains, strains, injuries	172
Synovitis	14
Orthopœdic conditions	2
Chronic skin conditions (acne, etc.)	27
Skin infections (furuncle, felon, etc.)	70
Burns	5
Eye conditions	3
Ear (removal of wax)	4
Menstrual conditions	10
Communicable diseases	10
Hypodermics of Iron	46
Vaccine administered	9
Reporting for daily temperature	9
Reporting illness	115
Total	1,023

III. REPORT ON ATHLETICS AND PHYSICAL TRAINING

(*T. A. Reed, Esq., Mus. Bac., Secretary, Athletic Association*)

(*a*) *Physical Training.*—The work of the session 1924-25 in Physical Training shows a distinct advance over that of the previous year, with a larger number of classes held, notwithstanding the slight falling off in the enrolment.

In the Gymnasium Classes for Compulsory Physical Training in the First and Second Years 489 sessions were held, with an enrolment of 775 students. In this work the Chief Instructor, Mr. D. M. Barton, had the assistance of Mr. A. J. Edmonds and Mr. W. H. Martin. Advantage was taken of the running track and the campus to conduct many of the classes out of doors in the favourable weather during the autumn and spring months. In addition to these classes, students who were physically fit were again permitted to choose some form of competitive athletics as an alternative, while 207 men were enrolled in the Officers' Training Corps and were granted their attendance in Physical Training on the certificate of the Adjutant.

The corrective work was developed under the Chief Instructor, and an increased number took advantage of the classes. In this work the Medical Director, Dr. Porter, and Mr. Barton are co-operating in providing suitable work for those with physical defects. There were 461 classes held for 215 men.

The swimming classes were again ably directed by Mr. W. W. Winterburn, who held 220 "Learn-to-Swim"classes and 230 classes in Life Saving. At these classes 101 students were taught to swim, and 217 men received the Royal Life Saving awards. It is impossible to exaggerate the importance of this branch of the work, the benefit of which must be obvious to all.

It is gratifying to know that very few First and Second Year men failed in making the required 80% of the classes or their equivalents, the number of

failures being considerably less than in any previous year. We feel sure that this indicates that the undergraduates are realizing more and more each year the benefit of this training.

(*b*) *Intercollegiate Athletics.*—In Intercollegiate Athletics the University of Toronto again held its own, and the results are gratifying from every standpoint, a high standard of sportsmanship being exhibited at all public contests. The following Intercollegiate Championships were won, namely, Senior Hockey, Senior Basketball, Junior Rugby, Boxing, Wrestling and Fencing, English Rugby and Golf. Queen's University again won the Senior Intercollegiate Rugby Championship, as well as the Earl Gray Cup for the Dominion Championship. They also won the Intermediate Intercollegiate Rugby. McGill won the Soccer, Tennis, Track, Swimming and Water Polo, Intermediate Hockey and the Gymnasium Meet, and the Royal Military College the Harrier and Junior Hockey. University teams represented Varsity in the O.R.F.U. Rugby Series, and in the O.H.A. Senior and Junior Series in Hockey, the Senior Team reaching the semi-finals and journeying to Winnipeg to battle for the Allan Cup, which, however, was won by the team from Fort William.

The Rowing Club brought great honour to the University in the winning by the Senior "Eight" of the Olympic trials, and being selected to represent Canada in the Olympic races at Paris in July. There they made a splendid showing, and were only defeated in the finals by the Yale University crew by a very small margin.

The Intercollegiate Boxing and Wrestling team again visited the United States Naval Academy at Annapolis, and the United States Military Academy at West Point, and the Hockey Team played a series of games with American University teams at Boston; while the Lacrosse Team made its annual Spring tour to several American Colleges. In all cases our teams made a good showing, and more than upheld the good reputation of the University of Toronto for fine sportsmanship, in addition to winning a fair proportion of the contests.

(*c*) *Interfaculty Athletics.*—In this important branch of University athletics there was the usual large enrolment in the various competitions for Interfaculty Championships. By means of these competitions students are encouraged to turn out and play for their College or Faculty in competition for the many valuable trophies which have been donated by friends of the University from time to time. The record for the past year is as follows:

Series	Cup	Winners	Total number of men engaged
Rugby	Sir William Mulock Cup	Jr. S.P.S.	300
Track	W. L. Rowell Memorial Cup	S.P.S.	123
Soccer	Arts Faculty Cup	O.A.C.	160
Harrier	J. Brotherton Cup	O.A.C.	82
Hockey	W. T. Jennings Cup	Sr. S.P.S.	204
Boxing, Wrestling and Fencing	Francis Davison Cup	Meds.	75
Indoor Baseball	A. G. Spalding Cup	Dents.	121
Swimming	A. N. FitzGerald Cup	U.C.	31 (6 teams)
Water Polo	H. P. Eckardt Cup	Sr. U.C.	93 (8 teams)
Indoor Track	Toronto Cricket Club Cup	S.P.S.	50
Rowing		Sr. S.P.S.	60 entries
Tennis	F. Y. McEachren Cup (University Champion)	A. W. Ham (Med. V)	141 entries
Swimming	B. Durnan Cup (University Champion)	L. G. Latchford (U.C.I.)	9 entries

It is with regret that we have to announce the resignation of Mr. A. J. Edmonds as Gymnasium Instructor after two years' very excellent work. Mr. Edmonds has contributed largely to placing our indoor work on a very high plane, and would undoubtedly have remained with us had he not received an offer of an appointment to take charge of Y.M.C.A. work in Melbourne, Australia. It will be difficult to replace him satisfactorily at a time when so many of our best Canadian instructors are being induced to go to other countries.

IV. DEPARTMENT OF PHYSICAL EDUCATION FOR WOMEN

(Miss I. G. Coventry)

I beg to submit the report of the Department of Physical Education for Women Students for the year 1924-1925.

Compulsory Physical Training Classes were composed of first year women students of University College and of the Faculty of Medicine, and voluntary students from University College, Trinity College, Victoria College and St. Michael's College.

The Compulsory Physical Training Class composed of First Year Women Students of University College, numbering one hundred and ninety-six, had to be subdivided into eleven classes on account of the limited floor space in the small gymnasium and to accommodate students who could not attend the regular class periods arranged for the compulsory class. This necessitated a great deal of repetition in teaching. Each class was given two periods per week instruction.

Six special periods of instruction in corrective and remedial exercises were arranged to accommodate women students who were medically advised to take this work. These classes were composed of ten to twelve students who attended two class periods per week. This work was conducted in a small, inadequate room while the gymnasium was being used for the larger classes.

To meet the many appeals of athletic teams and clubs for organized games, it was necessary to arrange several periods at hours not convenient to the students.

The attached time-table contains a summary of the occupied periods in the gymnasium and swimming pool.

It was impossible to arrange satisfactory class periods for the eighty-one students who were enrolled in the first, second and third year of the Diploma Course in Physical Training, due to the lack of room accommodation. It is expected that the enthusiasm and interest shown in these three courses will be continued next year, with the prospect of a fourth year Diploma Class.

It is to be hoped, Mr. President, that the women's new gymnasium will become a reality in the near future. In planning for the new building the following requirements are, in my estimation, very essential:

1. Sufficient grounds for the outdoor sports of—
   - (*a*) six tennis courts
   - (*b*) field hockey
   - (*c*) ice hockey
   - (*d*) lacrosse
   - (*e*) outdoor basketball
   - (*f*) outdoor baseball.
2. One large main gymnasium and six smaller gymnasiums.
3. Two lecture rooms.
4. Adequate offices for the Medical and Physical Education staffs.
5. Locker and dressing rooms.
6. Rest rooms.
7. Swimming pool and showers.

REPORT OF THE DEPARTMENT OF PHYSICAL EDUCATION FOR THE YEAR 1924-1925

Total number of students, all years, attending classes in gymnasium	373
First year compulsory students	196
First year Physical Education Diploma Class	60
Second Year Physical Education Diploma Class	8
Third Year Physical Education Diploma Class	13
Students, all years, Corrective and Remedial Class	63
Students, all years, Fencing Class	34
All years, Senior Interpretive and Classical dancing	14
All years, Junior National, Folk and Classical dancing	40

Students from Trinity College	4
Students from Victoria College	33
Students from St. Michael's College	6
University College basketball and baseball teams	21
Faculty of Medicine basketball team	12
Victoria College basketball and baseball teams	21
St. Michael's College basketball and baseball teams	21

SWIMMING REPORT

Total number of women students using the Swimming Pool from October to end of April 285

University College	171
Trinity College	14
Victoria College	88
St. Michael's College	12

REPORT OF THE ONTARIO COLLEGE OF EDUCATION FOR THE YEAR 1924-1925

Total number of women students in attendance at gymnasium and swimming classes..... 128

The gymnasium class was divided into two classes. These classes were given forty-five minute periods of instruction five days per week.

Classes in swimming were arranged into sections and instruction given one hour each day and two hours on Saturday morning.

(16) REPORT OF THE WARDEN OF HART HOUSE

(J. B. Bickersteth, Esq., M.C., M.A.)

During the past academic year several new ventures have been tried in Hart House. These appear now to have passed the experimental stage and are likely to take their place among the permanent activities of the House.

Such, for instance, are the debates held every month in the Lecture Room. The Hart House Debating Committee was called into existence owing to an insistent demand on the part of the undergraduates that debates on the open parliamentary system should be held regularly in Hart House. Under the management of this Committee, of which Professor G. E. Jackson was Chairman, a series of most successful debates have been held. For the first time in the history of the University members of the Provincial Legislature and of the Federal Parliament have debated over the floor of "the House" against each other and with the undergraduates. It is hoped that debates of this character have now become an established practice in Hart House, and as time goes on will attract the foremost statesmen of this country in the same way as the Oxford and Cambridge Debating Unions can rely on the steady support of the leaders of English political life. The success of these debates during the past year is largely due to Professor G. E. Jackson, Mr. V. W. Bladen and Mr. Maurice Cody.

Another innovation in the activities of Hart House has been the holding of Sing-Songs not only on certain evenings in the Music Room but also at the noon-hour on Tuesdays and Fridays in the East Common Room. The singing of University Songs by the undergraduates has been greatly encouraged by these informal concerts, which were made possible by the labours of Mr. Ross Workman, Mr. Melson and a keen undergraduate committee, and this experiment is likely to be developed in future years.

The Sunday Evening Concerts have been continued during the past year with increasing success. A series of eight concerts has been held at 9 p.m. in the Great Hall, which on every occasion has been packed with students to hear the outstanding artists of Toronto. The latter have willingly come to Hart House and given the undergraduates of their best without charging one cent of remuneration. The eight concerts this year have been given by Mr. Claud Biggs,

Mr. Arthur Blight, Mr. Reginald Stewart, Signor Guerrero, Madame Dusseau, Mr. Ernest Seitz, Miss Jessie McAlpine and the Hart House String Quartet. It would be difficult to exaggerate the importance of these most distinguished concerts which have become one of the great spiritual influences of Hart House.

No less successful have been the Friday Afternoon Recitals which have been held regularly every week at 5 p.m. in the Music Room from early in November to the end of March. Seventeen such recitals were held and they attracted a large attendance of undergraduates. Here again we were able to count on the co-operation of professional musicians who gave their services. Members of Hart House owe much to Dr. J. M. D. Olmsted, Professor J. G. Andison and the undergraduate members of the Music Committee, especially to its secretary, Mr. H. L. Martin.

The Sketch Committee, under the Chairmanship of Professor H. Wasteneys, has tried several experiments this year, chief of which have been the opening of the Sketch Room all day and the holding of continuous exhibitions. From the beginning of term in September until the middle of May there has not been a single day when there has not been an exhibition of pictures on the walls of the Sketch Room, and only on two occasions has an exhibition lasted for more than two weeks. The outstanding exhibition was undoubtedly that of Tom Thomson's pictures. Other exhibitions were as follows: the Montreal Group of Artists, the late Sir Edmund Walker's pictures, the Boston Group of Water-colour Artists, Austrian Silhouettes, English Posters, and the Artists of Saskatchewan. For the first time this year also the Committee arranged an exhibition of sketches and paintings by Undergraduate, Graduate and Faculty members of Hart House. One hundred and eleven exhibits were hung, and the success of this new venture will probably lead to its becoming an annual event. Indeed every exhibition was visited by members of Hart House in large numbers, and on the monthly Visitors' Day this room was filled with members and their friends the whole afternoon. The lighting of the Sketch Room itself was improved and the wall space enlarged. In connection with the exhibitions a series of discussions and informal lectures were given, some of the speakers being Mr. Lawren Harris, Professor J. J. R. McLeod, Mr. A. Y. Jackson, Mr. Wyly Grier, Professor J. Mavor, Mr. Vincent Massey and Mr. Leonard Richmond. As in previous years, Art Classes were conducted in the Sketch Room during the winter and were well attended.

In December the Camera Committee held its annual exhibition of photography in the Sketch Room, the pictures showing a very high standard of work. Mr. K. B. Jackson gives up the Chairmanship of this Committee with the end of the present academic year. The development of this most interesting department of the House is largely due to his energy and wise guidance.

It would be interesting if it were possible to keep some record of the number of persons who in full term time daily use Hart House. More and more it becomes the centre of undergraduate life as far as the men students are concerned. There can be no question that the use of Hart House has increased during the past two years in a most remarkable manner. The usual social functions have been held, and the fifth Annual Fancy Dress Ball took place in November, when in spite of the presence of some 1,800 masqueraders the House was not uncomfortably crowded. More important, however, than these large functions has been the almost constant use of the House for informal gatherings of all kinds. The Common Rooms thronged before and after meals with men of different Faculties and Colleges, who would never have been brought together except under these circumstances, bear witness to the value of Hart House as a common meeting place for the men undergraduates of this University.

During the early part of August 1924 Hart House opened its doors to the many hundreds of delegates who attended the meetings of the British Association

for the Advancement of Science and the International Mathematical Congress. It had not been expected that Hart House would be called on to serve meals to this large number of people, but the plans by which an outside caterer was to be employed fell through, and Hart House consented at very short notice to undertake full responsibility for this work. Some idea of the magnitude of these operations may be gained when it is stated that from 6th to 17th August about 1,200 regular meals a day were served in the Great Hall, besides a large number of special luncheons and dinners in other parts of the House. The Comptroller of Hart House and the Superintendent of the Great Hall had only a few days in which to get together an adequate staff and make all necessary arrangements to deal with this large undertaking. That it was carried through to a successful conclusion reflects great credit on Mr. J. R. Gilley (Comptroller) and on Mr. Campbell (Superintendent), the latter having only taken over his new duties a few weeks before.

In view of the efficient manner in which these conventions were managed it is not surprising that during the past session the operation of the Great Hall and of the other dining rooms in Hart House has met with considerable success. This, also, has been largely due to the Comptroller of Hart House and to the Superintendent of the Great Hall. Immediately on the appointment of Mr. Campbell, Mr. Gilley began a thorough reorganization of this department with the result that the meals served throughout the year to the undergraduates and also to senior members of the House have given every satisfaction. The numbers attending the Great Hall have increased enormously and the list of special luncheons and dinners has been greater than ever before. Especially gratifying is the fact that there has been a marked increase in the number of special undergraduate functions in the Great Hall and in the other dining rooms.

The Hall Committee, under the Chairmanship of Professor C. R. Young, has expended much time and labour on the manifold problems connected with this department of Hart House. The assistance the undergraduates have rendered to Mr. Campbell, and the extremely efficient management of the Superintendent himself during the past twelve months, promise well for the future.

Of the contribution which Mr. Gilley has made to the life of Hart House in all its various departments since his appointment as Comptroller in June 1923 it is impossible to speak too highly. In taking over almost all the purely administrative duties of this great institution, the Comptroller has displayed outstanding business ability combined with a true devotion to the best interests of Hart House.

After two years of valuable work as my secretary, Mr. R. D. Stott accepted an important appointment in connection with the University Settlement at Montreal. His successor, Mr. J. Hornal, a graduate of University College of 1924, is already filling with efficiency what is undoubtedly an arduous position.

During the past year the Students' Christian Association has carried on its work with a much reduced staff. A part-time undergraduate secretary has done everything possible to arrange study groups, and many speakers have addressed the undergraduates at midday under the auspices of this organization. Such have been Dr. Sherwood Eddy, Mr. K. T. Paul, Mr. Ariam Williams, Mr. Wilder, Dr. Richard Roberts, Canon Shatford, Principal Ritchie and Mr. T. Z. Koo. The Chapel has been used for informal services by the Men's Cabinet and by groups of medical and engineering students. A monthly celebration of the Holy Communion has also been held there.

On 16th October, H.R.H. the Prince of Wales spent the morning at Hart House. His visit was entirely informal. Arriving about 10.15 H.R.H. made a short tour of Hart House and then played several games of squash racquets with Mr. Philip Greey (Meds. IV). The Prince received a warm welcome from undergraduates who had congregated along the corridors of Hart House, and as he left

the building by the south-west door was cheered by a crowd which numbered several thousand persons, and included practically the whole undergraduate body. This was the second visit which the Prince of Wales has paid to Hart House, and he expressed his intention of returning on the first occasion that offered.

Early in January the Right Hon. W. L. Mackenzie King paid a visit to Hart House. The Prime Minister made a careful inspection of the House, which he was visiting for the first time. He lunched with the Board of Stewards at the High Table in the Great Hall, and afterwards delivered an address in the Theatre, which was packed with about 800 undergraduates for the occasion.

Other outstanding visitors to Hart House during the past academic year have been: Mr. Geoffrey Dawson (Editor of *The Times*), Miss Margaret Bondfield, Mr. H. A. L. Fisher, Mr. J. L. Paton, the Bishop of Gloucester, Mr. John Buchan, the Lieut.-Governor of Quebec, Professor Van Dyke, Sir Campbell Stuart, Sir Littleton Groom (Attorney-General of Australia), Mr. Cyril Maude, Her Excellency the Lady Byng, Sir Hugh Allen, Miss Lilian Faithfull, the Marchioness of Aberdeen, the Rev. P. B. Clayton (of Toc H), Dr. Bernard (Provost of Trinity College, Dublin), the Hon. Ernest LaPointe, and the Hon. Mr. Justice Duff. Many of these visitors met the members of Hart House in informal ways and several of them delivered midday addresses.

Information about Hart House has been sent by request to many parts of the world, including England, Australia, Switzerland, Germany, and at least ten States in the U.S.A. During the winter I visited the University of Pennsylvania, and also Princeton University, in order to discuss student affairs in these institutions. It would appear that Hart House is considered to be an interesting experiment with regard to certain aspects of University life and is being closely watched in many parts of the world.

The attendance at all Committees of Hart House during the past year has been excellent, both senior and undergraduate members giving careful consideration to the many problems which came before them. The various Colleges and Faculties of the University have been well represented on these Committees and have thus been brought into close touch with the life of Hart House.

It is perhaps not sufficiently realized how much Hart House owes to the members of the Faculty who so willingly serve on its Committees. Of those not already mentioned valuable assistance has been rendered by Dr. A. D. Mason and the Rev. E. J. McCorkell (House), Professor H. B. Speakman (Hall), Professor H. H. Wrong and Professor R. S. Knox (Library), Professor W. M. Treadgold and Professor E. J. Pratt (Billiards), Professor B. Fairley (Sketch Room), and Professor A. F. Coventry (Squash Racquets). On every Committee of Hart House there also sits a graduate member and these, too, have been regular attendants at meetings and have made a contribution of inestimable value to the House.

To the Board of Stewards, to which as the Governing Body is entrusted the direction, management and administration of Hart House and to the Finance Committee, I personally owe a great debt of gratitude. To the assistance of these various bodies, and to the co-operation of the undergraduates as a whole, any progress that may have been made during the past year is entirely due.

(17) REPORT OF THE DIRECTOR OF THE CONNAUGHT LABORATORIES

(Dr. J. G. FitzGerald)

This is the eleventh annual report of the work of these laboratories.

A brief presentation only, of certain features of the activities carried on in the fields of research, investigation, teaching and public service, will be undertaken.

In the report for 1924 reference was made to the fact that the International Health Board of the Rockefeller Foundation had offered to contribute to the Governors of the University the sum of $650,000 for the purpose of establishing in the University a School of Hygiene, with which these laboratories would be closely associated. This splendid gift has been accepted, and it has been arranged that a new building to provide quarters for the Connaught Laboratories, the Department of Hygiene and Preventive Medicine, and the Department of Public Health Nursing, as well as for the School of Hygiene, is to be erected. This new building will, it is hoped, be ready for occupancy in the early fall of 1926. Financial provision for the support of the work of the new school has been arranged by the terms of the International Health Board benefaction which stipulates that $250,000 at least of the total sum contributed is to be used for purposes of endowment. When to this is added the Connaught Laboratories Research Fund, the interest on a sum approximating $500,000 will be made available for the support of research in Preventive Medicine, Physiological Hygiene, Chemical Hygiene, Bacteriology and Immunology, and Epidemiology and Biometrics, in the School of Hygiene and Connaught Laboratories.

The organization of the Connaught Laboratories has been somewhat modified, and in 1925-26, in addition to the Director and Associate Director, the following new administrative positions are to be established in the laboratories —three Assistant Directors and a Comptroller. It is hoped that this step will lead to the development of latent administrative and executive talents which, as the years go by, may prove to be of the utmost significance to these laboratories. The growth in volume of work and consequent increase in personnel made it highly desirable to assign certain administrative responsibilities to younger members of the scientific staff. This step, it is anticipated, will also enable the Director and Associate Director to devote more time to the conduct of scientific research.

Changes in Personnel.—It is with deep regret that I have to record the passing of one of the most promising of my younger colleagues. Dr. W. Ray Hodge, who only last year was appointed Research Associate in the Connaught Laboratories, died on November first 1924. Dr. Hodge was on the threshold of a career of usefulness and distinction in his chosen profession, and his early death is a tragic loss. His associates will ever cherish his memory. The following promotions, appointments and resignations have to be noted at this time:

Dr. P. J. Moloney, Research Associate, promoted to Assistant Director.
Dr. D. T. Fraser, Research Associate, promoted to Assistant Director.
Dr. C. H. Best, Research Associate, promoted to Assistant Director.
Mr. F. Lorne Hutchison, M.A., appointed Comptroller.
Dr. Mary Cowan appointed Research Associate.
Dr. Neil McKinnon appointed Research Assistant.
Miss E. Woodsworth appointed Research Assistant.
Miss Beatrice Howitt, M.A., appointed Research Assistant.
(From September 15, 1925.)

Resignations

Mr. C. Beecher Weld, M.A.—Mr. Weld has resigned in order that he may enter upon the course in Medicine.

Miss Cecile Cohen, B.A.—Miss Cohen has for nearly six years been seconded for duty in the laboratories by the Department of Soldiers' Civil Re-Establishment. During this time she has been engaged in the conduct of research in association with Dr. Caulfeild and Dr. Hodge. She also leaves to enter upon the study of medicine. Miss Cohen has done excellent work and her resignation has been accepted with regret. There have been certain other changes in the personnel of the Antitoxin and Insulin Divisions. The staff on June 30th numbered 65, of whom 59 are on full time and 6 on part time basis.

Research Division.—During the past year investigations have been undertaken in scarlet fever. Dr. Hodge, Dr. Fraser, Dr. Arthur Graham and Dr. G. H. Eagles (the latter two Fellows of the International Health Board), Dr. Mary Cowan, Miss Dorothy McCullough and Miss E. Woodsworth, have completed important work and have brought to light many interesting facts relating to infection and immunity in scarlet fever. The work of the Dicks, Dochez, and others has been confirmed, extended and amplified in several important particulars. A large scale investigation of the Dick Test, active and passive immunization against scarlet fever and specific serum treatment of this disease has been carried on, also in conjunction with the various provincial departments of health in Canada. Very considerable quantities of scarlet fever toxin and antitoxin have been distributed to these departments for this purpose. The results of this research work have been embodied in a series of papers published during the year.

Dr. Moloney and Mr. Weld have been engaged in most interesting and valuable researches dealing with the modification of diphtheria toxin (toxoid or anatoxin) and have also investigated the flocculation reaction of Ramon. These studies have been carried to the point where it has been demonstrated that modified diphtheria toxin is a desirable substitute for toxin-antitoxin as an immunizing agent against diphtheria. Dr. Moloney has also begun some fundamental investigations of the mechanism of toxin-antitoxin union and dissociation. The modification of tetanus toxin with formalin is being investigated by Dr. Defries and Dr. McKinnon. A further study of vaccine virus and of other ultra-microscopic living agents is also being conducted at the present time by Dr. Defries and Dr. McKinnon. This most important and very obscure field of microbiology deserves much more attention than it has hitherto received. Dr. Caulfeild and his associates, Miss McLennan and Mrs. LaRush, have continued their studies of the serological reactions in tuberculosis in man and lower animals. Dr. Caulfeild has also directed the work of Captain V. C. Best, who has been engaged in a study of tuberculous infection and immunity in dogs.

Miss Cohen, in conjunction with Dr. G. S. Eadie, has been occupied in an interesting study of the antigenic properties of various extracts of vegetable proteins (pollens) employing for the purpose the Dale method (isolated smooth muscle preparations). Miss Wigham and Dr. FitzGerald have continued their study of the "normal" diphtheria antitoxic content of human blood. It is hoped that this may shed some light on the fundamental question of possible fluctuations in immunity and resistance. Dr. C. H. Best, Dr. D. A. Scott, Mr. K. McAlpine and Miss Ridout have been very actively engaged in research in the Insulin Division, and important advances have been made in the methods of extraction and purification of Insulin. Interesting and valuable contributions have also been made to our knowledge of the chemistry of insulin by Dr. Scott, Dr. Best, and Miss Ridout, with the assistance of Dr. R. G. Smith, who have continued their study of the mechanism of insulin action. Within the past month, in collaboration with Dr. W. J. MacDonald, an investigation of the depressor action of liver extracts has been undertaken. Dr. Best and Dr. Scott are also engaged in a biochemical study of these preparations. Mr. W. M. MacDonald, of the McGregor-Mobray Clinic, Hamilton, is carrying on certain investigations in the Insulin Division as a guest, research worker. A second volume of studies from the Connaught Laboratories is at present in press. A complete list of the publications of the staff of these laboratories is appended hereto.

Antitoxin and Insulin Divisions

During the year notable advances have been made in the method of production of diphtheria antitoxin. Recent advances in knowledge have also led to the preparation of scarlet fever streptococcus toxin and scarlet fever antitoxin

on a large scale. The production of diphtheria antitoxin, tetanus antitoxin, vaccine virus, antimeningococcic serum, anti-rabic vaccine, typhoid and pertussis vaccine, toxin-antitoxin mixture, toxoid, Schick and Dick test outfits, and Insulin, has been carried on as in previous years. These products are distributed throughout Canada and some of them in many other countries. Further reductions in the price of diphtheria antitoxin and insulin have been made; this is in harmony with the policy adopted when the laboratories were first established.

Notable improvements have been made at the University Farm. Twelve acres of land to the east of the property have been purchased and the farm now consists of over seventy acres. A very great deal of work has been done to beautify the University Farm. The results so far achieved reflect the greatest credit on those responsible for this development.

The Director desires to express his deep appreciation of the splendid services rendered by the Chairman of the Connaught Laboratories Committee of the Governors, Colonel Albert E. Gooderham. To his colleagues and associates in the laboratories he also wishes to convey his hearty thanks for their continued co-operation and assistance in the conduct of the work of the laboratories.

(18) BIOLOGICAL MUSEUM AND ROYAL ONTARIO MUSEUM OF ZOOLOGY

(*Professor B. A. Bensley*)

During the year 1924-25 there were important additions to the zoological collections and to the library.

(1) The following specimens were received by donation:

Specimens of osprey, sharp-shinned hawk and western phalarope from R. V. Lindsay, Toronto.

A bald eagle, mounted, in case, from P. H. Mitchell and Dean C. H. Mitchell, Toronto.

2 red phalaropes and a Brewer's blackbird (Hudson's Bay) from Mrs. Munday, Toronto.

A collection of amphibia and other specimens from W. J. LeRay, Toronto.

A caiman skin from W. G. Trethewey, Toronto.

3 birds from G. E. Lindblad, Toronto.

A collection of birds from Georgian Bay and other specimens from Dr. Paul Harrington, Toronto.

180 birds of the Sudan from H. S. Osler, Toronto.

A passenger pigeon from Paul Hahn, Toronto.

Specimens of fish jaws and insects from Brig.-Gen. G. H. Ralston, Port Hope.

A mountain beaver, mounted, from Kenneth Racey, Vancouver, B.C.

(2) Photographs and reproductions of animal pictures were received from J. H. Fleming, W. J. LeRay, Dr. Paul Harrington and R. V. Lindsay.

(3) The library received a large number of pamphlets bearing on animal classification. The "History of Quadrupeds," 2 vols., 1793, was presented by Dr. Harrington.

(4) Several collections were purchased at a nominal valuation, including:
A collection of bird skins from J. A. Munro, Oak Bay, B.C.
A collection of mammal skins from W. J. LeRay, Toronto.
A collection of bird skins, property of the late J. L. Jackson, Toronto.
A collection of mammal skins from A. A. Wood, Coldstream, Ont.

(5) Members of the scientific and technical staffs made field collections during the summer of 1924, including a series of 265 bird and mammal skins from Lake Nipigon region and many specimens of fishes, amphibia, and reptilia from this and other regions. A special collection of insects was made by N. K. Bigelow in Iowa.

(19) STATEMENT REGARDING THE ROYAL ONTARIO MUSEUM OF GEOLOGY

(*Professor E. S. Moore*)

During the past year considerable additions have been made to the collections of the Museum through collection, donation and purchase. An attempt is being made to exhibit more of the features of the Ontario mines and with that end in view copies of the models of several of the important mines of the province are being prepared for exhibition in the gallery and they will be completed during this summer.

There have been received by donation the following exhibits:

Eleven large water colours of geological scenes painted by Dr. A. P. Coleman, Toronto.

Suites of French iron ores from Mr. D. L. Grabill, Toronto.

Clay concretions from Desbarats, Ontario, from Mr. Cyril Dawson, Desbarats, Ont.

Red Cedar log from the interglacial beds of the Don Valley, from Dr. A. P. Coleman.

By Collection the following specimens have been received:

Iron ores from the Michipicoten District, Ontario.

Silver ores from Gowganda, Ontario.

A number of minor specimens from various parts of the province.

The following specimens have been added by purchase:

Jamesonite from England, Sphalerite from Scotland, Carnotite from Colorado, copper ores from Arizona and New Mexico, gold from California, garnets from the Ural Mountains, and sandstone from South Dakota exhibiting remarkable structural features.

The Director wishes to express his appreciation of the courtesy of the officials of several of the mining companies in the Province in connection with the securing of exhibits, particularly the mine models which are being prepared.

(20) STATEMENT REGARDING THE PALAEONTOLOGICAL MUSEUM

(*Professor W. A. Parks*)

During the year the following major specimens have been mounted in the gallery: a fine skeleton of the Irish deer (*Cervus giganteus*) and two additional crania with antlers; a head of the dinosaur *Lambeosaurus lambei;* the head of a new species of horned dinosaur, *Arrhinoceratops brachyops;* a head of *Hypacrosaurus altispinus;* and a frill of *Centrosaurus apertus.*

In the workshop a partial skeleton of *Ornithomimus* has been prepared but it is not yet mounted owing to lack of funds for cases. The work of preparation of the large skeleton of *Edmontosaurus* has occupied most of the time of the preparators and will require several months to complete. During the winter a number of new storage cases was supplied in the basement.

The University expedition to the Red Deer River, Alberta, succeeded in

securing several fine specimens from the Edmonton formation. The Director spent some time in examining a bog in Saskatchewan from which were obtained numerous specimens of Indian workmanship and the teeth of an extinct species of antelope.

The more important acquisitions during the year are as follows:

By Donation

Models of Piltdown skull and jaw—Dr. H. M. Ami, Ottawa.
Antler of Rangifer caribou—Mr. Herbert Brown, Toronto.
Antler of Cervus canadensis—Mr. Geo. Smith, Toronto.
Cranium of musk ox, Pleistocene of Toronto—Mr. R. Burleigh, Toronto.
Fossils from Queen Charlotte Islands—Capt. Thomas Smith, Toronto.
Stigmaria from Coal Measures—Mr. Paul Weir, Ziegler, Illinois.
Collection of Coal Plants, Minto, N.B.—Dr. W. S. Dyer, Ottawa.
Rare Trenton and Niagara fossils from Lake Timiskaming—Dr. G. S. Hume. Ottawa.
Devonian fossils from Great Slave Lake—Dr. P. S. Warren, Edmonton.
Small collections of fossils—N. K. Bigelow, J. S. Cardingley, G. A. Carefoot, Professor Carruthers, Dr. Coleman, H. W. Fleury, Dr. Frayleigh, R. J. Philp, S. Johnston.

By Collection

Teeth of an extinct antelope and examples of Indian workmanship from a bog in Saskatchewan—The Director.
Several skeletons of dinosaurs from the Edmonton formation of Alberta—The University expedition of 1924.
Fossils from the Ordovician of Workman's brook—Miss M. A. Fritz.

By Purchase

Mesozoic and Tertiary fossils from California—Charles Sternberg.
Complete skeleton and two sets of antlers of Irish deer—Miss Pride, Toronto.

(21) STATEMENT REGARDING THE MINERALOGICAL MUSEUM

(*Professor T. L. Walker*)

In the Royal Ontario Museum of Mineralogy, are very extensive collections of minerals and rocks. The most generous benefactors of this section were men connected with the mining industry. To make the collections more useful to visitors the large specimens contained in the high cases are provided with special explanatory labels. In the cases on the east wall of the gallery a special display of the minerals of Canada is arranged. The Director appeals to friends of the University for contributions of minerals and rocks with a view to the expansion of these collections.

For several years an intensive campaign has been carried on to make the systematic collection as complete as possible. This has been accomplished largely by exchange of material that has been collected and described by members of the staff with other museums. The generous co-operation of the mine owners in all parts of Canada has increased the resources of the museum not only by adding to the material for display and study but by augmenting the material that can be used for exchange.

During the past year the collections have been increased by the purchase of the collection of the late Peter Kirkegaard.

Notable presentations have been made by the International Nickel Company, the Mining Corporation of Canada, the Hollinger Consolidated Gold

Mines, Limited, Professor W. T. Gordon, Dr. J. Mackintosh Bell, Professor W. S. Hutchinson, E. Wallingford, Esq., G. C. Bateman, Esq., and T. L. Gledhill, Esq.

Important exchanges have been made with the British Museum (Natural History), Museo Nacional de Ciencias Naturales, Madrid, the Australian Museum, the United States National Museum, Professor A. Pelloux, and Lazard Cahn, Esq.

(22) STATEMENT REGARDING THE MUSEUM OF ARCHAEOLOGY

(Professor C. T. Currelly)

During the past year the rapid growth of the Royal Ontario Museum of Archaeology has continued, a very large number of outstanding national treasures having been added.

Some important Irish prehistoric vases and stone implements have been obtained, also a number of bones of extinct animals from Kent's Cavern, which were associated with early flint work.

In the Babylonian collection five hundred and forty tablets have been added.

The Classical Department has been increased by a great many important Greek coins and by numerous bronzes and pieces of sculpture. A considerable quantity of material relating to Roman-Britain has also been added to the collection.

An extremely good series of Savage Art from Australia was received as a unit, and a smaller collection also came from the same country. The painted Pueblo pottery, so interesting and valuable from the standpoint of design, has been increased by eighteen pieces. A good collection of masks and other work from the Canadian West Coast was obtained, also, from another source, a magnificent totem pole, which is at present in the grounds of the Canadian National Exhibition. A fine collection of Ontario Indian material from the western part of the province has been added to the Indian Stone Age material.

The additions to the Arms and Armour collection are markedly outstanding, mainly a boy's suit of Charles I time, obtained from the Byron family, some remarkably good helmets, hafted weapons, a Viking sword, some important early swords, and the rapier belonging to John Hampden. An object of great interest that has recently arrived is the armguard for an English archer, a beautiful piece of ivory ornamented around its borders.

The Ceramic collection has received important pieces of French and English porcelain and Persian faience.

The Chinese section has continued its rapid growth, about eighty large pieces of porcelain of the Ming and Ch'ing dynasties having been received and placed on exhibition, also a number of early potteries from the Han to the Sung dynasties, numbers of bronzes and hundreds of smaller pieces of domestic and military use. The outstanding acquisition for the whole year is a frieze of carved stone, fifty feet long by eighteen inches wide, showing a hunting scene; this is of the Han dynasty. A few important pieces of sculpture, large and small, have also been obtained. A very interesting addition was a series of Siamese enamelled pottery of the eighteenth century, made to order in China for the Siamese kings, and showing distinctive Siamese shapes and decoration.

To the Japanese section have come a magnificent lacquered saddle and stirrups, and some beautiful examples of the armourer's art.

The department of Textiles has been enlarged by a collection of hundreds of pieces showing the velvets and brocades of the fifteenth to eighteenth centuries,

and by several extremely beautiful pieces of lace. A large number of costumes has also been added to this department, and a few carpets from China.

A few examples of early printed cards have been obtained.

The Furniture and Woodwork section has been growing rapidly. A number of chairs and other pieces of eighteenth century furniture have been received, the outstanding acquisition being a large overmantel by Grinling Gibbons.

The terribly crowded condition of the Museum makes any adequate exhibition of our objects impossible, as it would require three times our present space for proper display of what is already in the building.

APPENDIX B

(1) Enrolment in Colleges.
(2) Enrolment in University subjects.
(3) Registration in Courses in the Faculty of Arts.
(4) Registration for Graduate Courses.

(1) ENROLMENT IN THE COLLEGES

The students in University College were enrolled as follows:

	Greek	Latin	Ancient History	English	German	French University College	French Other Faculties	Orientals	Ethics
First Year—									
Pass. . .	11	192	64	261	28	177	123	124	0
Honours. . .	11	45	51	71	17	118		0	5
Second Year—									
Pass.	12	31	8	158	8	117	49	80	22
Honours. . .	6	26	5	59	22	91		2	4
Third Year—									
Pass.	4	23	9	139	12	132	42	82	45
Honours. . .	6	9	6	33	15	63		4	8
Fourth Year—									
Pass.	2	11	3	121	9	90		60	33
Honours. . .	3	4	3	14	12	45		1	9
Totals—									
Pass.	29	257	84	679	57	509	214	346	100
Honours. . .	26	84	65	244	66	317	0	7	26

The students in Victoria College were enrolled as follows:

	Greek	Latin	Ancient History	English	German	French	Orientals	Ethics
First Year—								
Pass.....	5	60	36	64	19	67	9	..
Honours.....	3	27	31	50	11	44	..	3
Second Year—								
Pass.....	3	17	2	72	6	57	6	22
Honours.....	3	21	3	43	13	37	..	1
Third Year—								
Pass.....	3	18	4	71	4	60	5	28
Honours.....	1	1	1	15	12	19	1	6
Fourth Year—								
Pass.....	1	8	..	66	2	41	2	10
Honours.....	3	3	3	11	1	6	1	6
Totals—								
Pass.....	12	103	42	273	31	225	22	60
Honours.....	10	52	38	119	37	106	2	16

The students in Trinity College were enrolled as follows:

	Greek	Latin	Ancient History	English	German	French	Orientals	Ethics
First Year—								
Pass.....	13	32	11	26	2	25	2	..
Honours.....	..	5	5	9	..	10	..	
Second Year—								
Pass.....	..	8	1	15	1	16	5	7
Honours.....	..	3	..	8	2	6	..	..
Third Year—								
Pass.....	2	11	3	25	1	16	2	12
Honours.....	..	1	..	3	..	1	..	..
Fourth Year—								
Pass.....	..	5	1	13	..	9	..	4
Honours.....	6	3	3	6	..	1	..	..
Totals—								
Pass.....	15	56	16	79	4	66	9	23
Honours.....	6	12	8	26	2	18	..	..

The students in St. Michael's College were enrolled as follows:

	Greek	Latin	Ancient History	English	German	French	Philosophy	Ethics
First Year—								
Pass.....	5	51	..	46	4	57	..	..
Honours.....	2	8	8	17	4	18	..	..
Second Year—								
Pass.....	..	27	..	24	..	24	12	..
Honours.....	..	4	4	7	1	7	3	3
Third Year—								
Pass.....	..	16	..	49	..	44	34	16
Honours.....	..	..	..	5	1	3	4	4
Fourth Year—								
Pass.....	..	14	..	39	1	31	27	13
Honours.....	..	1	..	5	..	3	6	6
Totals—								
Pass.....	5	108	..	158	5	156	73	29
Honours.....	2	13	12	34	6	31	13	13

(2) Enrolment in University Subjects

The following tables exhibit the numbers attending lectures in University subjects, together with the number of those taking the practical work in the laboratories:

DEPARTMENT OF MATHEMATICS

	Pass	Pass and Honours	Honours
Faculty of Arts—			
First Year.....	377	...	112
Second Year.....	21	...	134
Third Year.....	27	...	33
Fourth Year.....	16	...	10
Faculty of Medicine—			
First Year.....	20	...	...
Second Year.....	2	...	...
Third Year.....	3	...	...
Faculty of Applied Science and Engineering—			
First Year.....	...	121	...
Second Year.....	...	105	...
Totals.....	466	226	289

DEPARTMENT OF PHYSICS

	Pass	Pass and Honours	Honours	Laboratory
Faculty of Arts—				
First Year	246	..	115	115
Second Year	3	..	79	72
Third Year	9	..	13	25
Fourth Year	5	..	9	8
Faculty of Medicine—				
First Year	..	107	..	107
Second Year	..	9	..	9
Third Year	..	3	..	3
Graduate Students	..	2	..	2
Faculty of Forestry—				
First Year	15	..	..	15
Faculty of Household Science—				
First Year	11	..	8	19
School of Graduate Studies	..	..	37	13
Totals	289	121	261	388

DEPARTMENT OF BIOLOGY

	Pass	Pass and Honours	Honours	Laboratory
Faculty of Arts—				
First Year	247	..	68	68
Second Year	17	..	58	75
Third Year	34	..	9	43
Fourth Year	25	..	8	33
University Extension—				
Teachers' Class, Toronto	46	..	..	46
Faculty of Medicine—				
First Year	..	106	..	106
Second Year	..	46	..	..
Third Year	..	20	..	20
Faculty of Applied Science and Engineering—				
Fourth Year	..	3	..	3
Faculty of Household Science—				
First Year	..	..	7	7
Second Year	4	..	..	4
Faculty of Forestry—				
First Year	..	12	..	12
Fourth Year	..	11	..	11
School of Graduate Studies	..	..	..	12
Ontario Agricultural College—				
Second Year	..	87	..	..
Third Year	..	27	..	27
Totals	373	312	150	467

DEPARTMENT OF BOTANY

	Pass	Pass and Honours	Honours	Laboratory
Faculty of Arts—				
First Year	246	..	68	68
Second Year	47	..	29	76
Third Year	23	..	9	32
Fourth Year	20	..	8	28
Faculty of Applied Science and Engineering	..	19	..	19
Faculty of Forestry—				
First Year	..	12	..	12
Fourth Year	..	12	..	12
School of Graduate Studies	..	..	14	14
Totals	336	43	128	261

DEPARTMENT OF CHEMISTRY

	Pass	Pass and Honours	Honours	Laboratory
Faculty of Arts—				
First Year	247	..	120	120
Second Year	37	..	71	108
Third Year	43	..	4	6
Fourth Year	2	..	8	10
Faculty of Medicine—				
First Year	..	109	..	109
Second Year	..	97	..	97
Faculty of Applied Science and Engineering—				
First Year	..	18	..	18
Second Year	..	25	..	25
Third Year	..	61	..	61
Fourth Year	..	15	..	15
Faculty of Forestry—				
First Year	15	..	..	15
Second Year	5	..	..	5
School of Graduate Studies	..	..	25	19
Totals	349	325	228	603

DEPARTMENT OF GEOLOGY

	Pass	Pass and Honours	Honours	Laboratory
Faculty of Arts—				
First Year	304	..	51	..
Second Year	..	..	14	14
Third Year	10	..	2	12
Fourth Year	12	..	1	13
University Extension—	31	..	..	31
Faculty of Applied Science and Engineering—				
Second Year	..	35	..	3
Third Year	..	28	..	6
Fourth Year	..	8	..	8
Faculty of Forestry—				
Second Year	..	7	..	..
Third Year	..	11	..	11
School of Graduate Studies	..	..	11	11
Totals	357	89	79	109

DEPARTMENT OF MINERALOGY

	Pass	Pass and Honours	Honours	Laboratory
Faculty of Arts—				
Second Year	10	..	15	25
Third Year	..	..	4	3
Fourth Year	..	..	3	1
Teachers—	31	..	..	31
Faculty of Applied Science and Engineering—				
First Year	..	20	..	20
Second Year	..	33	..	33
Third Year	..	6	..	6
Fourth Year	..	3	..	3
Faculty of Forestry—				
Second Year	..	7	..	7
School of Graduate Studies	..	..	5	5
Totals	41	69	27	134

DEPARTMENT OF PHILOSOPHY

	Pass	Honours
Faculty of Arts—		
Second Year	41	22
Third Year	30	19
Fourth Year	22	12
School of Graduate Studies	..	16
Department of Social Service—		
First Year	26	
Second Year	16	
Totals	135	69

DEPARTMENT OF POLITICAL ECONOMY

	Pass	Honours
Faculty of Arts—		
First Year	160	76
Second Year	95	92
Third Year	106	86
Fourth Year	118	54
Faculty of Medicine—		
Second Year	3	..
Faculty of Applied Science and Engineering—		
Second Year	121	..
Faculty of Forestry—		
Third Year	11	..
School of Graduate Studies	..	33
Department of Social Service—		
First Year	30	..
Second Year	15	..
Department of Public Health Nursing	10	..
Occasional Students	7	..
Totals	676	341

DEPARTMENT OF HISTORY

	Pass	Honours
Faculty of Arts—		
First Year	129	97
Second Year	57	115
Third Year	84	65
Fourth Year	94	43
University Extension	212	..
School of Graduate Studies	..	13
Faculty of Medicine	5	..
Totals	581	333

DEPARTMENT OF ITALIAN AND SPANISH

	Italian		Spanish	
	Pass	Honours	Pass	Honours
Faculty of Arts—				
First Year	14	1	155	29
Second Year	5	4	37	27
Third Year	4	3	28	7
Fourth Year	6	1	32	18
School of Graduate Studies	..	2	..	2
Faculty of Applied Science and Engineering—	..	..	15	
Totals	29	11	267	83

DEPARTMENT OF HOUSEHOLD SCIENCE

	Pass	Honours
Faculty of Arts—		
First Year	..	20
Second Year	..	22
Third Year	31	21
Fourth Year	28	18
Faculty of Household Science—		
First Year	11	8
Second Year	4	..
School of Graduate Studies	..	2
Department of Public Health Nursing	31	..
Totals	105	91

(3) REGISTRATION IN COURSES IN THE FACULTY OF ARTS, 1924-1925

Courses	First Year				Second Year				Third Year				Fourth Year				
	U C	V C	T C	M C	U C	V C	T C	M C	U C	V C	T C	M C	U C	V C	T C	M C	Totals
Pass	224	67	34	59	83	34	13	24	111	69	26	43	119	47	13	34	1,000
Classics	6	2	..	2	5	1	..	..	6	1	..	..	3	3	3	..	32
Greek and Hebrew	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Orientals	..	..	..	..	1	..	..	..	..	1	..	..	..	1	..	..	3
Orientals (Greek Option)	..	..	..	..	1	..	..	..	4	..	..	..	..	..	..	..	5
French, Greek and Latin	2	1	3	2	2	2	..	1	..	..	..	..	..	..	..	..	13
Moderns	22	12	4	10	27	14	1	3	24	11	1	3	30	6	1	3	172
English and History	37	26	2	4	19	22	5	3	18	9	1	1	2	8	3	2	162
Modern History	2	1	..	..	8	3	1	..	4	2	2	2	2	3	2	..	32
Political Science	12	5	1	1	26	13	1	..	31	2	1	2	13	7	3	1	119
Commerce and Finance (B.A.)	..	..	..	..	..	..	..	..	12	1	..	..	9	5	..	..	27
Philosophy (English or History Option)	4	2	..	1	6	6	1	..	8	1	..	..	4	..	..	..	33
Psychology	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1
Philosophy	..	1	..	..	4	1	..	3	5	4	..	5	4	3	1	6	37
Mathematics	7	2	3	1	5	2	1	..	4	..	..	..	5	..	..	..	27
Mathematics and Physics	20	7	2	1	11	7	1	..	10	2	..	..	2	2	..	..	66
Natural and Physical Sciences	33	13	..	2	..	..	..	..	..	..	..	..	..	..	..	..	50
Physics	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	2
Biology	..	..	..	..	..	2	..	..	6	3	..	..	6	1	1	..	19
Physiology and Biochemistry	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Biological and Medical Sciences	..	..	..	..	19	9	1	..	12	5	1	..	8	9	..	1	65
Chemistry and Mineralogy I	..	..	..	..	2	5	..	..	1	2	..	..	1	1	1	..	13
Chemistry and Mineralogy II	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Chemistry	..	..	..	..	1	2	..	..	1	..	..	..	4	1	..	..	9
Geology and Mineralogy	..	..	..	..	3	..	1	..	..	..	..	..	1	..	..	..	5
Science (General)	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1
Household Science	..	..	..	..	2	..	..	..	1	..	..	..	..	1	..	..	4
Household Economics	7	8	3	..	13	4	2	1	7	12	1	..	9	8	..	..	75
Commerce and Finance (B.Comm.)	44	7	3	2	45	16	1	1	18	6	..	1	13	..	..	..	157
Duplicates	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2
Totals	420	154	55	85	285	145	29	36	283	131	33	57	235	106	28	47	2,127

(4) REGISTRATION FOR GRADUATE COURSES

	Ph.D.	M.A.	M.D.	Ch.M.	M.A.Sc.	M.Arch.	C.E.	E.E.	Chem E.	D.Paed.	F.E.	Graduate Students
Department of Anatomy	..	..	..	..	..	..	..	..	..	..	....	..
" " Architecture	..	..	..	..	..	2	..	..	..	..	....	..
" " Astronomy	..	1	..	..	..	..	..	..	..	..	....	..
" " Biochemistry	4	5	..	..	..	..	..	..	..	..	....	..
" " Biology	5	2	..	..	..	..	..	..	..	..	....	..
" " Botany	3	7	..	..	..	..	..	..	..	..	....	1
" " Chemical Engineering	..	..	..	..	4	..	..	..	2	..	....	..
" " Chemistry	11	13	..	..	..	..	..	..	..	..	....	1
" " Civil Engineering	..	..	..	..	2	..	3	..	..	..	....	..
" " Classics	2	7	..	..	..	..	..	..	..	..	....	..
" " Educational Theory	1	3	..	..	..	..	..	..	..	..	....	..
" " Electrical Engineering	..	..	..	..	..	..	..	1	..	..	....	..
" " English	3	17	..	..	..	..	..	..	..	..	....	26
" " Food Chemistry	..	2	..	..	..	..	..	..	..	..	....	..
" " Forestry	..	..	..	..	..	..	..	..	..	..	1	..
" " Geology and Palæontology	4	1	..	..	..	..	..	..	..	..	....	..
" " German	..	2	..	..	..	..	..	..	..	..	....	..
" " History	6	9	..	..	..	..	..	..	..	..	....	..
" " Household Science	..	..	..	..	..	..	..	..	..	..	....	3
" " Hygiene and Preventive Medicine	1	1	..	..	..	..	..	..	..	..	....	..
" " Mathematics	..	7	..	..	..	..	..	..	..	..	....	3
" " Mechanical Engineering	..	..	..	..	..	..	..	..	..	..	....	..
" " Medicine	..	1	..	..	..	..	..	..	..	..	....	..
" " Metallurg. Eng	..	..	..	..	2	..	..	..	..	..	....	..
" " Mineralogy	4	..	..	..	..	..	..	..	..	..	....	..
" " Mining Engineering	..	..	..	..	2	..	..	..	..	..	....	..
" " Pathology and Bacteriology	..	..	1	..	..	..	..	..	..	..	....	..
" " Pathological Chemistry	2	..	..	..	..	..	..	..	..	..	....	..
" " Pedagogy	..	..	..	..	..	..	..	..	..	57	....	..
" " Pharmacology	..	2	..	..	..	..	..	..	..	..	....	..
" " Philosophy	2	10	..	..	..	..	..	..	..	..	....	6
" " Physics	8	8	..	..	..	..	..	..	..	..	....	..
" " Physiology	1	4	1	..	..	..	..	..	..	..	....	..
" " Political Science	5	19	..	..	..	..	..	..	..	..	....	4
" " Psychology	1	4	..	..	..	..	..	..	..	..	....	5
" " Romance Languages	1	13	..	..	..	..	..	..	..	..	....	3
" " Semitic Languages	3	..	..	..	..	..	..	..	..	..	....	1
" " Surgery	..	..	..	1	..	..	..	..	..	..	....	..
" " Zymology	2	..	..	..	..	..	..	..	..	..	....	1
Totals	69	139	2	1	10	2	3	1	2	57	1	54

APPENDIX C

RESULTS OF EXAMINATIONS

(1) Faculty of Arts.
(2) Faculty of Medicine.
(3) Faculty of Applied Science and Engineering.
(4) Faculty of Household Science.
(5) Ontario College of Education.
(6) Faculty of Forestry.
(7) Faculty of Music.

(1) Faculty of Arts

First Year

	University of Toronto	Univ. Coll.	Vic. Coll.	Trin. Coll.	St. M. Coll.	Totals	Passed	Starred	Failed	Transferred	Aegrotat	Deferred	Debarred
Pass	..	203	62	33	52	350	128	108	114	..	8	..	63
Supplementals	..	43	14	4	13	74	41	33	..	..	..	..	..
Classics	..	6	2	..	2	10	9	..	..	1	..	..	..
French, Greek and Latin	..	2	1	3	2	8	5	..	..	3	..	..	..
English and History	..	36	26	2	3	67	47	1	..	19	..	..	..
Moderns	..	22	12	4	10	48	39	1	..	8	2	..	..
Political Science and Modern History	..	14	6	1	1	22	14	3	..	5	1	..	..
Philosophy	..	..	1	..	..	1	1	..	..	..	..	..	..
Philosophy, (English or History)	..	4	2	..	..	6	3	..	..	3	..	..	..
Mathematics	..	6	2	..	..	8	4	2	..	2	..	1	..
Mathematics and Physics	..	18	7	3	1	29	18	3	..	8	..	..	..
Natural and Physical Sciences	..	27	12	2	2	43	31	12	..	..	..	2	..
Household Science	..	..	1	..	..	1	1	..	..	..	..	..	..
Household Economics	..	7	8	3	..	18	11	3	1	3	..	..	..
Commerce and Finance	..	42	7	3	2	54	25	11	18	..	2	..	5
Occasional Students	..	3	1	..	..	4	4	..	..	..	..	..	..
Totals	..	433	164	58	88	743	381	177	133	52	13	3	68

Second Year

	University of Toronto	Univ. Coll.	Vic. Coll.	Trin. Coll.	St. M. Coll.	Totals	Passed	Starred	Failed	Transferred	Aegrotat	Deferred	Debarred
Pass	..	81	32	12	19	144	84	37	23	..	2	..	26
Supplementals	..	42	23	11	12	88	62	26	..	..	..	..	..
Classics	..	5	1	..	..	6	5	1	..	..	1	..	..
Orientals	..	1	..	..	..	1	1	..	..	..	..	..	..
Orientals (Greek)	..	1	..	..	..	1	..	1	..	..	..	..	..
French, Greek and Latin	..	2	2	..	1	5	4	1	..	..	1	..	..
Moderns	..	26	15	1	3	45	43	1	1	..	4	..	2
English and History	..	19	22	5	3	49	44	1	..	4	1	1	..
Modern History	..	7	4	1	..	12	7	1	..	4	1	..	..
Political Science	..	27	12	1	..	40	31	3	1	5	..	..	..
Philosophy	..	4	1	..	3	8	8	..	..	..	..	..	..
Philosophy (English or History)	..	6	6	1	..	13	12	1	..	..	..	..	..
Mathematics	..	5	2	1	..	8	5	1	1	1	1	1	..
Mathematics and Physics	..	10	7	1	..	18	12	4	1	1	..	3	..
Physics	..	1	1	..	..	2	1	..	1	..	..	..	..
Biology	..	..	2	..	..	2	1	1	..	..	..	..	..
Physiology and Biochemistry and Biological and Medical Sciences	..	19	9	1	..	29	17	8	1	3	1	2	1
Chemistry and Mineralogy	..	2	5	..	..	7	4	2	1	..	1	..	..
Chemistry	..	1	2	..	..	3	2	..	1	..	..	..	..
Geology and Mineralogy	..	3	..	1	..	4	3	1	..	..	..	..	..
Household Science	..	1	..	..	..	1	1	..	..	..	..	..	..
Household Economics	..	13	4	2	1	20	16	4	..	..	1	..	..
Science (General)	..	..	1	..	..	1	1	..	..	..	..	..	..
Commerce and Finance	..	45	16	1	..	62	23	19	20	..	1	..	7
Occasional Students	..	4	2	2	..	8	8	..	..	..	..	..	..
Totals	..	325	169	41	42	577	395	113	51	18	15	7	36

Third Year

	University of Toronto	Univ. Coll.	Vic. Coll.	Trin. Coll.	St. M. Coll.	Totals	Passed	Starred	Failed	Transferred	Aegrotat	Deferred	Debarred
Pass	..	107	68	26	40	241	160	42	39	..	12	..	18
Supplementals	..	31	9	2	5	47	35	12	..	..	..	..	..
Classics	..	6	1	..	..	7	7	..	..	..	..	..	1
Orientals	..	..	1	..	..	1	..	1	..	..	..	1	..
Orientals (Greek)	..	4	..	..	..	4	2	1	..	1	1	..	..
Moderns	..	23	11	1	3	38	38	..	..	..	2	..	..
English and History	..	18	9	1	1	29	28	1	..	..	2	..	..
Modern History	..	4	2	2	2	10	10	..	..	..	..	..	..
Political Science (Economics)	..	10	1	..	..	11	11	..	..	..	..	..	..
Political Science (Law)	..	21	1	1	2	25	22	..	3	..	..	..	..
Commerce and Finance (B.A.)	..	12	1	..	..	13	9	4	..	..	..	1	..
Philosophy	..	5	4	..	5	14	14	..	..	..	2	..	1
Philosophy, English or History	..	7	1	..	..	8	7	1	..	..	..	..	..
Mathematics	..	4	..	..	..	4	4	..	..	..	..	..	..
Mathematics and Physics	..	10	2	..	..	12	12	..	..	..	..	..	1
Biology	..	6	3	..	..	9	7	2	..	..	..	..	1
Biological and Medical Sciences	..	12	5	1	..	18	18	..	..	..	..	..	3
Chemistry and Mineralogy I	..	..	1	..	..	1	1	..	..	..	..	..	1
Chemistry and Mineralogy II	..	1	1	..	..	2	2	..	..	..	..	..	..
Chemistry	..	1	..	..	..	1	1	..	..	..	..	..	..
Household Science	..	1	..	..	..	1	1	..	..	..	..	..	..
Household Economics	..	7	12	1	..	20	20	..	..	..	..	..	..
Commerce and Finance (B.Com.)	..	18	6	..	1	25	25	..	..	..	..	..	3
Occasional Students	1	4	2	..	2	9	9	..	..	..	..	..	..
Totals	1	312	141	35	61	550	443	64	42	1	19	2	29

Fourth Year

	University of Toronto	Univ. Coll.	Vic. Coll.	Trin. Coll.	St. M. Coll.	Totals	Passed	Granted standing on Active Service	Starred	Failed	Aegrotat	Pass Degree
Pass	..	119	47	13	34	213	171	18	33	9	7	..
Supplementals	..	2	1	2	2	7	6	..	1	..	..	..
Classics	..	3	3	3	..	9	9	..	..	..	1	1
Orientals	..	..	1	..	..	1	1	..	..	..	..	..
Moderns	..	30	6	1	2	39	39	..	..	..	1	..
English and History	..	2	8	3	2	15	15	..	..	..	..	..
Modern History	..	2	3	2	..	7	7	2	..	..	..	..
Political Science (Economics)	..	2	2	..	..	4	4	1	..	..	..	..
Political Science (Law)	..	11	5	3	1	20	19	..	1	..	..	2
Commerce and Finance (B.A.)	..	9	5	..	..	14	13	..	..	1	..	1
Philosophy	..	4	3	1	6	14	14	1	..	..	1	..
Philosophy, English or History	..	4	..	..	..	4	4	..	..	..	..	..
Mathematics	..	5	..	..	..	5	5	..	..	..	1	..
Mathematics and Physics I	..	..	1	..	..	1	1	..	..	..	..	..
Mathematics and Physics II	..	2	..	..	..	2	2	..	..	..	..	..
Mathematics and Physics III	..	..	1	..	..	1	1	..	..	..	..	..
Biology	..	6	..	1	..	7	7	..	..	..	..	..
Biological and Medical Sciences	..	8	9	..	1	18	17	..	..	1	1	1
Chemistry and Mineralogy I	..	1	1	1	..	3	3	..	..	..	..	..
Chemistry and Mineralogy II	..	..	..	..	..	..	..	1	..	..	..	..
Chemistry	..	4	1	..	..	5	5	..	..	..	..	..
Geology and Mineralogy	..	1	..	..	..	1	1	..	..	..	..	..
Household Science	..	..	1	..	..	1	1	..	..	..	..	..
Household Economics	..	9	8	..	..	17	16	..	1	..	..	..
Commerce and Finance (B.Com.)	..	13	..	..	..	13	12	..	1	..	..	..
Occasional Students	..	8	2	..	1	11	9	..	2	..	..	..
Totals	..	245	108	30	49	432	382	23	39	11	12	5

TEACHERS' CLASSES

	Passed	Starred	Aegrotat
May Examination	145	19	2
September Examination	119	23	..
Totals	264	42	2

(2) FACULTY OF MEDICINE

	Passed	Starred	Failed
First Year	67	25	9
Second Year	79	17	3
Third Year	88	23	3
Fourth Year	101	21	2
Fifth Year	166	19	1
Sixth Year	117	10	3
D.P.H	3	..	..
D.R	2	..	..
B.Sc. (Med.)	5	..	..
Totals	628	115	21

(3) FACULTY OF APPLIED SCIENCE AND ENGINEERING

	Passed with Honours	Passed	Starred	Failed
First Year—				
Civil Engineering	3	14	8	1
Mining Engineering	2	9	1	1
Mechanical Engineering	6	11	6	1
Architecture	3	6	5	2
Chemical Engineering	3	12	3	3
Electrical Engineering	4	31	21	0
Metallurgical Engineering	0	1	1	1
Second Year—				
Civil Engineering	2	18	11	4
Mining Engineering	0	5	2	2
Mechanical Engineering	3	16	11	4
Architecture	3	6	1	0
Chemical Engineering	3	12	7	5
Electrical Engineering	5	30	16	0
Metallurgical Engineering	0	3	2	0
Third Year—				
Civil Engineering	3	19	13	0
Mining Engineering	0	6	3	0
Mechanical Engineering	4	16	11	3
Architecture	2	4	1	0
Chemical Engineering	1	13	7	3
Electrical Engineering	4	21	6	6
Metallurgical Engineering	1	2	1	2
Fourth Year—				
Civil Engineering	9	13	5	0
Mining Engineering	2	5	2	1
Mechanical Engineering	8	20	3	0
Architecture	4	5	1	0
Chemical Engineering	7	17	0	0
Electrical Engineering	11	30	5	0
Metallurgical Engineering	1	4	2	0
Totals	94	349	155	39

(4) FACULTY OF HOUSEHOLD SCIENCE

	Passed	Starred	Failed
First Year	10	7	1
Second Year	3	1	..
Totals	13	8	1

(5) ONTARIO COLLEGE OF EDUCATION

	Passed	Failed
*High School Assistants' Course	260	..
Specialists' Courses	105	..
First Class Public School Course	29	..
Elementary Art Course	36	..
Elementary Physical Culture Course	141	..
One Year Household Science Course	16	..
Bachelor of Pedagogy Course	28	..
Bachelor of Pedagogy Course (passed in part)	41	..
Number who failed in whole or part	..	68
Totals	656	68

*Many of these are included among those who passed or failed in the other courses in this list.

(6) FACULTY OF FORESTRY

	Passed	Honours Deferred	Failed
First Year	8	3	1
Second Year	4	2	..
Third Year	6	4	2
Fourth Year	9	2	1
Totals	27	11	4

(7) FACULTY OF MUSIC

	Passed	Starred	Failed
First Year	15	4	2
Second Year	9	8	3
Third Year	2	6	4
Doctor of Music	..	1	..
Totals	26	19	9

APPENDIX D

GEOGRAPHICAL DISTRIBUTION OF STUDENTS

The geographical distribution of students is as follows:

FACULTY OF ARTS

	University of Toronto	University College	Victoria College	Trinity College	St. Michael's College	Duplicates	Totals
Ontario: (1) Province	111	519	336	96	101	14	1,149
(2) Toronto	193	705	177	40	108	11	1,212
Nova Scotia	...	5	...	1	...	..	6
New Brunswick	...	7	1	1	2	..	11
Prince Edward Island	...	1	...	1	...	..	2
Quebec	...	3	3	...	2	..	8
Manitoba	...	7	...	1	...	..	8
Saskatchewan	1	6	24	...	1	1	31
Alberta	2	3	3	...	...	..	8
British Columbia	...	9	3	6	2	1	19
Yukon	...	1	...	...	1	..	2
United States	...	8	2	4	8	..	22
Elsewhere	1	12	8	1	1	1	22
Duplicate registrations	...	..	...	...	...	28	..
Totals	308	1,286	557	151	226		2,500

SUMMARY

	Faculty of Arts	Faculty of Medicine	Faculty of Applied Science and Engineering	Faculty of Household Science	College of Education	Faculty of Forestry	Faculty of Music	School of Graduate Studies	Department of Social Service	Department of Public Health Nursing	Duplicates	TOTALS
Ontario:												
(1) Province	1,149	393	257	9	268	20	15	103	28	13	23	2,232
(2) Toronto	1,212	315	194	11	169	13	35	164	52	31	35	2,161
Nova Scotia	6	2	1	..	3	..	..	6	3	..	..	21
New Brunswick	11	..	1	..	1	..	..	..	1	..	..	14
Prince Edward Is.	2	1	..	..	..	..	..	1	..	..	..	4
Quebec	8	1	..	..	5	1	1	2	3	..	..	21
Manitoba	8	1	3	..	10	1	..	7	1	..	..	31
Saskatchewan	31	18	6	..	7	..	2	10	1	1	3	73
Alberta	8	10	4	..	2	..	3	8	2	..	..	37
British Columbia	19	43	7	..	4	2	5	13	..	..	..	93
Yukon	2	1	3	..	..	..	..	..	..	..	..	6
United States	22	6	..	1	1	1	2	4	1	..	2	36
Elsewhere	22	7	12	2	1	5	..	18	3	5	2	73
Totals	2,500	798	488	23	471	43	63	336	95	50	65	4,802

The students from the Province of Ontario are distributed as follows:

	Faculty of Arts	Faculty of Medicine	Faculty of Applied Science and Engineering	Faculty of Household Science	College of Education	Faculty of Forestry	Faculty of Music	School of Graduate Studies	Department of Social Service	Department of Public Health Nursing	Duplicates	TOTALS
Algoma	7	11	7	..	2	1	..	1	..	..	3	26
Brant	37	20	8	..	3	..	..	2	1	..	1	70
Bruce	23	7	6	..	2	1	..	3	2	1	..	45
Carleton	44	11	6	..	17	2	..	4	4	3	..	91
Dufferin	13	4	1	..	2	1	..	..	..	..	..	21
Dundas	12	1	1	1	2	..	..	1	1	..	..	19
Durham	19	10	3	..	3	1	2	3	..	..	1	40
Elgin	8	6	6	..	5	..	..	1	..	..	..	26
Essex	34	13	4	1	7	1	..	1	..	1	2	60
Frontenac	3	2	..	..	5	..	..	3	2	..	..	15
Glengarry	2	1	..	..	2	..	..	..	..	..	..	5
Grenville	8	1	1	..	5	1	..	..	1	1	..	18
Grey	25	15	6	..	5	2	..	3	..	..	..	56
Haldimand	20	10	4	..	2	..	..	1	..	..	..	37
Haliburton	..	..	..	..	..	..	..	..	..	..	..	..
Halton	45	11	9	..	7	..	2	3	..	..	1	76
Hastings	17	8	5	1	7	..	..	3	1	..	2	40
Huron	32	12	8	..	5	..	..	4	..	2	1	62
Kenora	2	..	..	..	..	..	..	..	..	..	..	2
Kent	17	10	6	..	3	..	..	2	1	..	1	38
Lambton	15	7	5	..	6	..	..	3	..	..	1	35
Lanark	14	3	..	..	7	1	..	5	..	1	..	31
Leeds	10	3	2	..	5	..	..	..	..	..	..	20
Lennox & Addington	10	1	1	..	4	..	..	1	..	..	..	17
Lincoln	48	13	10	2	5	..	..	4	..	..	2	80
Manitoulin	1	..	..	..	1	..	..	..	..	..	..	2
Middlesex	29	4	13	..	23	..	2	10	2	..	1	82
Muskoka	15	4	5	..	1	..	..	1	..	..	1	25
Nipissing	8	9	..	1	4	..	..	2	..	..	..	24
Norfolk	15	7	4	1	..	..	..	..	..	..	..	27
Northumberland	15	5	4	..	3	..	1	2	..	1	..	31
Ontario	49	12	9	1	2	..	1	2	1	..	1	76
Oxford	31	5	6	..	9	..	1	4	..	..	..	56
Parry Sound	5	2	1	..	2	..	1	..	..	..	..	11
Peel	31	12	13	..	7	..	..	..	..	..	..	63
Perth	34	8	8	..	11	..	2	4	..	..	..	67
Peterborough	30	5	7	..	11	..	..	..	..	..	..	53
Prescott	2	1	..	..	4	..	..	1	..	..	..	8
Prince Edward Is.	2	1	..	..	1	..	..	..	..	..	..	4
Rainy River	3	..	..	..	..	..	..	..	..	..	..	3
Renfrew	15	2	1	..	3	..	1	1	..	..	..	23
Russell	2	..	..	..	2	..	..	..	..	..	..	4
Simcoe	66	20	13	1	6	1	..	4	3	..	..	114
Stormont	2	..	2	..	2	..	..	..	..	..	..	6
Sudbury	5	..	..	..	..	1	..	..	..	1	..	7
Thunder Bay	5	3	4	..	3	..	..	..	..	..	..	15
Timiskaming	5	2	4	..	2	..	..	..	..	..	..	13
Victoria	16	10	1	..	4	..	..	1	..	..	..	32
Waterloo	46	16	11	..	8	..	..	3	1	1	..	86
Welland	34	19	8	..	5	..	..	2	1	1	..	70
Wellington	44	14	9	..	12	1	1	6	1	..	2	86
Wentworth	107	26	17	..	12	1	1	6	2	..	1	171
York	67	26	18	..	19	5	..	6	4	..	2	143
Toronto	1,212	315	194	11	169	13	35	164	52	31	35	2,161
Totals	2,361	708	451	20	437	33	50	257	80	44	58	4,393